

Vol.

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OLD SERIES VOL. XII

# THE PSYCHIATRIC QUARTERLY

SUCCESSOR TO THE STATE HOSPITAL QUARTERLY

Dedication of New York's New Psychiatric Institute

Remarks and Prospects at the Opening  
Psychiatric Institute and Hospital

Psyche and Psychoid

Psychiatric Imponderables

The Mechanism of Hallucinations

The Breeding of the Mental Endowment

Psycho-Analysis and Psychiatry

Some Observations on Cataplexy

Psychiatry and the Criminal

Psychiatry and the Medical School

The Significance of Natural Science

Progress in Teaching Psychiatry

Architectonics and Progressive Psychiatry

New York Psychiatric Institute

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## DEDICATION OF NEW YORK'S NEW PSYCHIATRIC INSTITUTE AND HOSPITAL

The Dedicatory Ceremony at the New York State Psychiatric Institute and Hospital, Columbia-Presbyterian Medical Center, 722 West 168th Street, New York City, was held Tuesday morning, December 3, 1929, at eleven forty-five o'clock, Dr. George H. Kirby, Director of the New York State Psychiatric Institute and Hospital, presiding.

### OPENING ADDRESS BY DR. GEORGE H. KIRBY

Lieutenant Governor Lehman, Distinguished Guests, Ladies and Gentlemen: It affords me great pleasure to extend a most cordial welcome to all of you who have so kindly come to participate in the dedicatory exercises marking the official opening of the new Psychiatric Institute and Hospital.

The significance of the occasion which brings us together today is, I feel, most happily attested by the fact that from far and near there have come to join with us in our dedication so many outstanding leaders in the fields of medicine, education, public affairs and social welfare. We are specially honored in having with us for these ceremonies the eminent psychiatrists who have traveled from distant points, both in this country and abroad, to contribute papers to the scientific sessions of today and tomorrow. It is a pleasure to express to them our warmest thanks and our keen appreciation of the valuable messages which they will surely bring to us in their addresses which are to follow this afternoon and tomorrow.

The completion of the Psychiatric Institute and Hospital, the first ever constructed in the State of New York, brings to fruition a plan long under consideration but which for various reasons could never hitherto be realized. It was through a happy combination of circumstances, affording an opportunity for cooperation between the State of New York and the Medical Department of Columbia University, that success was finally achieved—and, achieved in these beautiful and inspiring surroundings and on a scale which would have been considered as scarcely possible a short time ago.

As a result of this union of forces, the Psychiatric Institute and

Hospital now stands completed, an enduring monument to the wisdom and humanitarian impulses of those who guided the policies of the State and the University which resulted in the founding of this institution as one of the units of a great medical center.

This magnificent building which we today dedicate for service in the public welfare has been most generously equipped. It contains unexcelled laboratory and clinical facilities. It has ample space for teaching purposes and provides the most modern equipment for the special study and treatment of all types and phases of mental disturbance in both children and adults.

This ideal location, this spacious building, this unsurpassed equipment, all seem like the fulfillment of a dream, a wish suddenly made real, to those who have striven for the consummation of this undertaking. The completion of the Institute brings large responsibilities, but, above all, it brings a great opportunity, an opportunity which is probably unparalleled anywhere in the world today. It is an opportunity for scientific work and organized research into all of the intricate problems which have to do with a better understanding of the workings of the human mind and a more adequate knowledge of the causes which distort mental life and which bring illness and suffering and such a vast amount of social inefficiency and unhappiness.

Whatever success may attend our efforts will depend primarily on our ability to foster and cultivate in every department and activity of this Institute a spirit of research. It is our hope that the opportunity here afforded will attract to us an increasing number of individuals who have the vision, the originality and the imagination to grasp the complex problems of psychiatry, and having this capacity, will also have the determination and ability to translate into productive work and practical achievement whatever knowledge and light our labors and researches throw on the understanding and treatment of a group of disorders which beyond doubt belong to one of the most difficult fields in the whole realm of medical science.

As presiding officer on this auspicious occasion it is a great pleasure and a privilege to now introduce the speakers of the morn-

ing, distinguished representatives of the State, the University and the other units of the Medical Center.

One of the most important executive and administrative divisions of our State government is the Department of Mental Hygiene. The Commissioner of this department exercises supervision and control over all of the public and private hospitals, schools and colonies, which deal with any form of mental abnormality.

The present Commissioner, appointed by Governor Smith and reappointed by Governor Roosevelt, has been from the first deeply interested and most helpful in the carrying forward of the plans for the completion and adequate equipment of the Institute and Hospital.

I now have the honor to introduce to you the Commissioner of the Department of Mental Hygiene, Dr. Frederick W. Parsons. (Applause.)

#### ADDRESS BY COMMISSIONER PARSONS

Mr. Chairman, Lieutenant Governor Lehman, Distinguished Guests, Ladies and Gentlemen: The eagerly awaited day has at last arrived and now we dedicate to its noble purpose the New York State Psychiatric Institute and Hospital. All are pleased that the occasion is presided over by the Director of the Institute, and I hope that the state of his health will permit him to attend all the sessions.

On behalf of the Department of Mental Hygiene, I welcome the distinguished guests from abroad and at home, many of whom have traveled weary miles and have sacrificed their personal convenience. To them, the Department owes its deepest thanks.

The amalgamation of the medical, scholastic and psychiatric interests, which are typified by this building, was long advocated, but it remained for Thomas W. Salmon and C. Floyd Haviland to appreciate the opportunity when the occasion arose. It is to them and to the fact that Governor Alfred E. Smith was in Albany, a man whose heart always warmed to the opportunity of doing something for someone else, that this Institute was made possible.

I also like to think, and I have been indulging in the pleasing fancy, that the structure itself today typifies the position of psychi-

atry in the medical world. This building, the foundations of which go down to Riverside Drive, is entered on the tenth floor. Beneath we have that medical structure which is our heritage as physicians, and above in the towers, pointing the way upwards, we have the laboratories and research facilities without which no progress can be made; the whole of the structure leaning against and drawing sustenance from this great Columbia-Presbyterian Medical Center. It would be unkind and unfair to say the Psychiatric Institute in any way supports this medical structure, but I believe that all the physicians realize that the intimate study of man as a thinking, motivated, intelligent being can contribute something to the profit of both medicine and surgery.

All psychiatrists can take great satisfaction in the fact that a structure devoted to that branch of medicine in which they are most interested is considered to be worthy of a place in the great enterprise which we know as the Columbia-Presbyterian Medical Center.

Let me welcome you. I trust you will find the scientific sessions stimulating, interesting and instructive. We are greatly pleased to see here, men of renown in their own country and in this, and they grace the occasion by their presence. (Applause.)

CHAIRMAN KIRBY: The opportunity to present psychiatry to medical students under conditions comparable to those in other branches of clinical medicine is one of the outstanding advantages of the location of the Psychiatric Institute in this Medical Center. The dean of the Medical School has taken the initiative in urging that students during their course of instruction be brought in closer contact with the problems of mental medicine and psychopathology. He has approved a plan of instruction which emphasizes the importance of training every student to treat the whole individual, his mental and emotional problems as well as his physical disturbances. Since this Institute and Hospital has been under construction, the number of hours devoted to psychiatry in the medical curriculum has been increased by one hundred per cent. It is a great pleasure to introduce as the next speaker a distinguished teacher and eminent surgeon, the dean of the College of Physicians and Surgeons of Columbia University, Dr. William Darrach. (Applause.)

## ADDRESS BY DR. WILLIAM DARRACH

On behalf of the College of Physicians and Surgeons, I wish to welcome most heartily, the New York State Psychiatric Institute and Hospital. As neighbors and as colleagues we look forward with keen anticipation to long years of joint effort. Such opportunities for close cooperation between, on the one hand, an institution for the care of those mentally ill and for investigation into the causes of such troubles, and on the other, a medical school are not often seen either here or abroad. Not only our own Department of Psychiatry welcomes with open arms such unusual clinical facilities, but all other departments of the medical school are also eager to share the problems and take advantage of the help of this Institute. Only too long have man's physical ailments been studied and treated as something apart from his mental weakness. Mind and body are too closely associated and too intimately interdependent to be considered apart. The opening of this institution, built by the State of New York and to be maintained by the State in close cooperation with these other institutions whose aim is to maintain and restore and improve health, is truly of great importance.

To work with such an institution is welcomed by the College of Physicians and Surgeons as a great opportunity. With such an opportunity however, there comes also the realization of a great responsibility. We of the College of Physicians and Surgeons are aware of this responsibility and are solemn because of that awareness. We are committed to take every advantage of these opportunities which are, under the agreement, always "to be open to the students and staff of the College of Physicians and Surgeons." It shall be our endeavor that each student of the College shall learn to know not only the tragic conditions men's minds may reach but may learn to recognize what leads up to such conditions, that they may be avoided or mitigated. It is not enough to house and care for those afflicted with mental disease. Every effort must be made by painstaking, thorough and patient investigation to discover how it may be prevented. When means of prevention are discovered they must be taught not only to medical students but to the general public.



Smallpox and yellow fever have almost disappeared. Typhoid fever has become an uncommon disease. Tuberculosis, syphilis and gonorrhea are theoretically preventable. It is quite reasonable to hope that by such cooperative efforts as we are looking forward to, mental disease may similarly be brought within reasonable bounds.

The College of Physicians and Surgeons, the School of Medicine of Columbia University, bids you welcome and pledges you its hearty cooperation.

CHAIRMAN KIRBY: For many years the isolation and detachment of psychiatry from medicine and surgery and other branches was indeed a great hindrance to its progress. The location of the Institute now in close proximity to the great Presbyterian Hospital will afford a splendid opportunity for collaboration between psychiatrists and specialists in practically every branch of medicine.

It is a pleasure to acknowledge at this time the fine spirit of cooperation which has already been manifested by Dr. Palmer, Director of the Medical Service, and Dr. Whipple, Director of the Surgical Service, and by the chiefs of various other departments and clinics of the Presbyterian Hospital.

I appreciate the opportunity of presenting to you as the next speaker an eminent clinician and teacher, the Professor of Medicine in the College of Physicians and Surgeons, and Director of the Medical Service of the Presbyterian Hospital, Dr. Walter W. Palmer. (Applause.)

#### ADDRESS BY DR. PALMER

I thank you, Mr. Chairman, for the pleasure of taking part in this significant occasion when the State of New York joins hands with Columbia University, and the several affiliated hospitals, to aid in the great work of promoting health. It is indeed an honor and a privilege to bring greetings and good wishes from the Presbyterian Hospital; to congratulate the Psychiatric Institute on its success in the construction of this beautiful building, and more especially in assembling the able and competent staff who are to guide the activities within it; and to indicate briefly what the appearance of the Psychiatric Institute among the associated institutions means to the Presbyterian Hospital in the solution of one of its most



pressing and perplexing problems. I refer to the disturbed mental states encountered in individuals in need of medical and surgical care.

From the Orient (Chen Jen) comes the old saying, "When you treat a disease, first treat the mind", and we are familiar with the advice of our late Dr. Jacobi—"Treat the man who is sick, not a Greek name". All experienced and successful physicians and surgeons subscribe to the wisdom of such advice. Yet, with due understanding of the importance of the healthy mind, medicine has progressed far more in the treatment of organic disease than it has in caring for the mental ills appearing in modern life. That this is true is amply demonstrated in the enormous increase in the psychoneuroses. The literature is filled with volumes, monographs, and articles by professionals and amateurs alike dealing with the subject. Colleges and universities are instructing the youth how to acquire and maintain mental equilibrium. In the daily newspapers appear columns on "keeping mentally fit".

For this state of affairs the medical profession is often, perhaps justly, blamed. The disappearance of the wise old family physician, who, in times past so successfully watched over the mental and physical ills of his community, is frequently advanced as an explanation. Inquiry into the causes of the vanishing family physician reveals at once influences over which the medical profession has little control. Within a few decades there has been an extraordinary increase in the population of the cities. The city attracts the countryman as does a magnet steel. This change has come about so rapidly, the living conditions have so vastly changed that readjustments to the new environment have not been made. The Nordics, always a nature-loving, country-living people are found in the cramped, cell-like spaces of the cities. In our metropolitan areas there has been an unprecedented intermingling of races, with the inevitable strife and misunderstandings. Not only is there an increased struggle for existence, but there exists a widespread ambition for wealth and power which leads to greater and greater social inequalities. Human relationships have become complex and difficult. The ascendancy of the mechanical era with its inventions has filled our country with speed, din, and confusion. Inces-

sant motion and noise dominate our lives. There seems to be no leisure of mind for sober reflection. No wonder the prevalence of disturbed emotions and mental states! No wonder that along with its other inventions America is accused of inventing neurasthenia!

With these changes in living conditions medicine has not been a placid observer. Investigation of disease has brought forth new and better methods of diagnosis and treatment. No longer has the practice of medicine the simplicity of the days of the buggy and the bag of pills. Intricate apparatus, chemical, physiological, bacteriological, X-ray laboratories with experts in charge, and elaborate hospital facilities are now needed. With progress and the accumulating mass of knowledge, no one man can possibly encompass all. Inevitably specialists have developed. In obscure and complicated cases a dozen or more experts may be called upon to unravel the tangle.

In short, the rapidly shifting living conditions and the complexities of modern medical practice have submerged the grand old family physician of earlier days, and with his disappearance has arisen troubled spirits in profusion. Present day disturbed mental states are far more complicated than formerly. In the functionally deranged, symptoms simulating serious medical and surgical conditions may appear. The physician of today has not the time or training to cope with them. Both physicians and surgeons are thoroughly aware of the importance of treating the patient and "not a Greek name" and further acknowledge the need of expert advice in the complicated neurosis associated with organic disease.

So it is that the staff of the Presbyterian Hospital looks to the staff of the Psychiatric Institute for their expert aid in this difficult problem—the cure of disease completely, mental as well as physical.

CHAIRMAN KIRBY: The imposing building standing on the adjoining plot a few feet to the east is the New York Neurological Institute. The location of these two institutes side by side gives a splendid opportunity for the prosecution of clinical studies and laboratory researches in diseases which should be studied from the standpoint of both the neurologist and the psychiatrist. It is particularly gratifying that on this occasion we are to have a word of greeting from one of our most distinguished co-workers, an out-

standing clinician and research worker in the field of neurology and neuro-anatomy. I have the pleasure of presenting Dr. Frederick Tilney, a member of the Medical Board of the Neurological Institute and Professor of Neurology in the College of Physicians and Surgeons. (Applause.)

## ADDRESS BY DR. TILNEY

Dr. Kirby and Colleagues in the Psychiatric Institute: We, as your next door neighbor, have watched and waited patiently, admiringly. We have watched your structure rise here beside the Hudson. We have waited to see the signs of life shine from your windows and your portals open and hear you say you were ready to take your part as one of the militant bodies in this medical center.

Your structure stands complete. It is a monument not only to the benevolent forethought of a great humanitarian State, but it also announces your close alliance with an equally great university.

This is a momentous hour for you. Each of us in turn has faced its responsibilities, has been thrilled by it, has been touched in turn by its compelling obligations; for each of us it has been as it is now for you, an hour not merely of dedication but of consecration as well.

The finished structural body awaits the inbreathing of an enduring spirit which shall make it live. What shall that spirit be? Recognition of duty, devotion to service, faithfulness to the public trust, earnestness in the relief of the afflicted, intelligence in the prevention of disease, diligence in advance of science and spreading of truth, and always the courage and the vision of true leadership. All of this must be, and something far more. The spirit which will breathe through these corridors, through all this organization, to vitalize this splendid Institute, must be in the nature of an inspiration, unfailing and magical in its influence. Who shall define this inspiration? No one so well, I think, as our great intellectual leader, the President of Columbia University. He has already set this inspiration before us as a vision and a goal. It has cast its spell upon us. Those of us who heard his eloquent words will never forget them. They should be deeply impressed upon the

minds of us all. So if they come to you now, however imperfectly and at second-hand, as I ask his permission to repeat them to you in part, I feel sure that they will carry their inspiring message to you even so.

The highest places of the earth, he says, are not the most evident. They are ever those which the human spirit has seized upon as the capitals of its loftiest endeavors, of its most persistent achievements and its most commanding and compelling ideas. The high hills of civilization are these: The Mount of Olives, standing nearby the City of Jerusalem, the capital of our religion; the Acropolis at Athens, the center spot and capital of the literature, of the art, of the eloquence which have charmed the centuries; the Capitoline hill at Rome, that mighty hill of the modern world's order, law and government; in Paris, Mont Ste. Genevieve, for ten centuries the elevation which upheld the highest aspirations of human intellect and endeavor; then, across the Atlantic on an age-old rock, where the Hudson meets the sea, another elevation rising year by year in its far-flung influence—this eminence, this new western eminence is a rightful heir of the culture which the east, from Bethlehem, through the centuries, has bequeathed to the west, it is the heights called Morningside.

On that hill, says Dr. Butler, is the capital of the modern world's academic experience, academic effort, academic accomplishment, in every field of letters, of science, of law, of medicine and of the fine arts.

May you in this Institute, may we all in this center of medicine, be part of this new western hill in spirit and in fact, all we have to give, part of that elevation which sets its lights neither to the right nor the left, neither upward nor downward, but whose level gaze sweeps the broad horizon of man's best interests. Then the devotion and the courage and the inspiration in the hearts of those who have toiled and given their lives here will bear fruit abundantly. Then surely we shall have set up a new landmark in American idealism and built a new tower of strength for the hopes of men and women. (Applause.)

CHAIRMAN KIRBY: The President of the great University of which this Medical Center is a part needs no introduction to those

whose interests and work are dedicated to the service of mankind. As an educator and author, a contributor to the advancement of the social and political sciences, as a figure in international relations and a leader in many humanitarian enterprises, Dr. Butler is the embodiment of a great constructive force in our State and Nation. We know that his presence here today signifies his interest in our work and his belief that psychiatry can contribute something to the betterment of human relations as well as to the alleviation of disease and the preservation of mental health.

I have the honor to present the President of Columbia University, Dr. Nicholas Murray Butler. (Applause.)

## ADDRESS BY PRESIDENT BUTLER

Mr. Chairman, Lieutenant Governor Lehman: My presence on this platform surrounded by these distinguished physicians and men of science and facing this representative audience, itself recruited so widely from science and scholarship in other lands than ours, brings to my mind a newspaper report some few weeks ago of a happening in Washington which spread justified merriment throughout the land. A gentleman named Grundy of Pennsylvania, to be more famous than the lady who has long borne that name, was being interrogated by members of a committee of the United States Senate. The interrogating Senator said, "Mr. Grundy, do we understand that you think that Pennsylvania should write the tariff act?"

"Yes," said Mr. Grundy placidly.

"Then," the report went on, "what do you think should be the attitude and part of myself and my colleagues here?"

"I should think," replied Mr. Grundy, "that your intelligence would lead you to keep quiet." (Laughter.)

My intelligence ought to lead me to keep quiet on this occasion and to content myself with the personal pleasure and satisfaction of hearing these most admirably conceived and spoken addresses and of gaining the instruction which they and which this occasion have to offer. But I must add a word or two of greeting and congratulation and express the satisfaction which we all have, not only in connection with the occasion itself, but at the presence here of



eminent representatives of science and medicine in Great Britain and France and Switzerland and Germany, from Austria and from notable universities in different parts of the United States. Their coming was something for which we are all profoundly grateful and which will have, we are sure, a predominant part in making these exercises of today and tomorrow the distinguished exercises that they are certain to be.

Having spent twenty-five years in trying to bring this medical center into existence, I have now begun in true scientific spirit to test it. I began with the surgical division of the Presbyterian Hospital and spent some weeks in a scientific inquiry as to its adequacy, as to the satisfactory character of its equipment and as to its general administration. As a result of that laboratory experiment, I have rated it A-1. It is too late, I am afraid, to my regret, to take advantage of the facilities which the Babies Hospital offers, (laughter) glad as I should be to do so. But I am pretty certain that both Dr. Tilney and Dr. Kirby have their eye on future possibilities. (Laughter.)

I can only hope that if I make laboratory tests of the institutions which they direct, that the results of the experiment may take rank with the results of that which I have already made.

For the moment, I am the greatest living authority on the Medical Center, and if all goes well, in one hundred years or so to come, I may have opportunity to increase even that very large amount of practical knowledge.

There is one thing I wish to say about this undertaking which seems to me of very large public significance. We represent here that cooperation between government or official and private or unofficial public service which is characteristic of the United States, increasingly so, and which I think will seem to the historian of our social and political and intellectual life a very important contribution to an ordered and well organized civilization.

Our European contemporaries are compelled to depend much more largely than ourselves upon the initiative and the support of government for public service. In this country, we confine our government, or try to, to the reasonably narrow and definite limits set out for it in our constitutions, and we have reserved to ourselves



and we increasingly occupy that great area of public service, unofficial in character, which marks our field of liberty as contrasted with and marked off from our field of government. This is the reason why the habit of benefaction has grown up in the United States, has become so widespread, so magnificent in its vision and so extraordinary in its results.

Men and women who resist paying taxes to government, pour out their thousands and their millions to public service undertakings in the field of liberty. I know of no characteristic of American social, economic and political life more marked than that. The habit is growing and is now so strong that we look with confidence, on hearing of the disposition of a great estate or the acquisition of a large fortune, for evidence that the testator or the possessor is planning some great public service with a share of his accumulation.

Here we see these two forms of public expression joined together. Here we find them in intimate and close cooperation and that I conceive is a significant underlying fact in the philosophy of our public endeavors. What has been done here could not have been done without the cooperation of government quite apart from the construction of this great Psychiatric Institute and Hospital.

If the government did not cooperate by relief from taxation in the case of buildings and grounds dedicated to public service, an enterprise of this sort would not be practicable.

So much having been done, private enterprise then enters by benefaction poured out with glad willingness and pride and happiness. Institution after institution arises on this splendid site which was itself provided for the Medical Center by private benefaction of the most princely sort. One likes to think of these fundamental things, of what they mean and of the interpretation that we should put upon them as these associated and cooperating institutions rise side by side.

It is my very great satisfaction to stand here for this brief moment this morning to greet Dr. Kirby and his associates and for us all in the College of Physicians and Surgeons in the entire university and in our citizenship to reflect for an instant upon the high significance of the exercises which are just to begin. I cannot, however, take my seat without saying what I have said before in the

presence of many of you but which I may not have had opportunity to say before in the presence of some of you, that first vision of this Medical Center came just one hundred and sixty years ago to Dr. Samuel Bard, first Professor of Medicine in Kings College, probably the most distinguished physician of the American Colonies of the Eighteenth Century, himself a powerful factor not only in medicine but in the public life of New York, in his address at commencement in May, 1769, and it has taken all these long years to find ways and means to realize that dream and to bring into this full measure of cooperation institutions of which even his enlightened vision could hardly have had a conception. His name and fame are fortunately preserved in our university in the title of the chair of the practice of medicine which Dr. Palmer occupies with so great distinction. (Applause.)

CHAIRMAN KIRBY: One of the most difficult and burdensome problems which today confronts the State of New York is that of providing adequate accommodations for the care and treatment of the constantly increasing numbers of mental patients which are greatly overcrowding all of our State hospitals. The development of this Institute and Hospital represents a serious and well-considered effort on the part of the State to find a solution to this problem. The State has made this large investment in buildings and equipment and in personnel with the full realization that the eventual control of mental illness will depend primarily on the discovery through scientific research of the causes and effective treatment of mental disorders and, secondly, on the dissemination of this knowledge among the medical profession and the general public.

Since his inauguration, the Lieutenant Governor has taken a deep and sympathetic interest in the psychiatric problems of the State as he has seen them in his visits to our institutions, and he has also been keenly alive to the wider and more fundamental issues of the prevention of mental illness and public education in the principles of mental hygiene. It is highly gratifying to us that the Lieutenant Governor has taken time to come here today and to join with us in celebrating the opening of this new State enterprise. It is one more token of his deep interest in the mental health problems of the State and his support of the objects and aims of this Institute.

It is a great privilege to now present the Lieutenant Governor of the State of New York, the Honorable Herbert H. Lehman.

(The audience arose and applauded.)

## ADDRESS BY LIEUTENANT GOVERNOR LEHMAN

President Butler, Dr. Kirby, Commissioner Parsons, Ladies and Gentlemen: I feel a considerable sense of embarrassment and a deep feeling of responsibility in being the only layman who speaks today among so many distinguished educators and medical men. It reminds me of a rather amusing incident that occurred to me recently.

I was asked to speak at the dinner of the Academy of Political Science which was having a session on the subject of "Money, Banking and Speculation." All the other speakers, both during the sessions of the institution and at the dinner, were trained economists.

I was asked to speak on banking because until I took office a year ago that had been my work. They thought I knew something about it. I made my speech and after it was over, one of the leading economists, professor of one of our great colleges, was good enough to come up to me and say some gracious things about my speech. Just in order to give him some sort of an answer, I said, "Doctor, I felt my limitations very much indeed, because, after all, I am not a trained economist, and I had to speak entirely from the standpoint of the layman and the business man."

He said, "That is all right, Mr. Lehman. I wouldn't worry about that, because I think the bankers probably thought that you were a good politician and I am sure the politicians all thought that you were a good banker." (Laughter.)

So if I assume to speak today on a subject in which I very, very definitely know my limitations, I do so only because of my real and vital interest in this subject and possibly because I, on account of my ignorance and on account of my slight knowledge of the subject, have an enthusiasm which makes me eager to see that the State goes far in the furthering of the work of this department and other departments treating with medical care and education and because I feel that they can do much, because I want to be helpful in that regard.

The erection of this new Psychiatric Institute, the official opening of which we are celebrating today, marks a definite recognition by the State of the principle that not only must superior, enlightened and humane custodial care be given to our mentally afflicted wards, but effective scientific research and preventive work be undertaken to the end that incidence of the disease be lessened and curative measures be increased. I am confident that in increasing degree the necessity of proper institutional housing and good custodial care is being accepted by physicians and the community at large. Much, of course, remains to be done to overcome the present marked condition of overcrowding in our State hospitals, to replace the antiquated worn-out buildings with new structures and to enlarge and improve the entire social program of custodial care.

As a first step you, of course, know that under an agreement between the Governor and the Legislature there will shortly be undertaken the construction of buildings to provide 6,000 new beds, and this program must necessarily be extended during the next several years. From my knowledge, gained through visits to many of the State hospitals for the insane, I am convinced that such a program is absolutely essential, and this determination is concurred in by all those engaged or interested in the care of the mentally afflicted. All this is constructive and yet it cares for only one portion of the problem. Unfortunately, while great progress has unquestionably been made in this State and in other communities in the care of the patients, comparable advance has not been attained in medical and scientific fields which would so far warrant the hope of a largely reduced number of those mentally afflicted in our community.

As a matter of fact, from a purely layman's standpoint it seems to me that in spite of the efforts of a large number of devoted, well-trained and intelligent men and women, very little more is known organically at least, of the origin, treatment or effect of mental disorders than a generation ago. This appears to be pretty well borne out by the fact that the annual rate of increase in the population of our State hospitals for the insane has exceeded the rate of increase in the general population of the State. On the other hand, from time to time, through research, study and experimentation

new discoveries are made, which while affecting only a very small part of the great field of mental disorders, nevertheless give hope that through further and extensive research much of value may be developed. It is the hope that this will be the case that has justified the opening of this great institution.

I know from my talks with Dr. Parsons and Dr. Kirby and others in the State service that here will be given the opportunity to undertake medical and social research on a scale and of a character never before made possible under State auspices. There will be opportunities given to doctors, nurses and social workers for the continuous observation of patients at all times and under all conditions. Two hundred selected patients will be in residence, with special wards for children. Every change, every bit of progress or retrogression, every symptomatic development may be observed and noted by trained physicians and made part of a coordinated study of mental diseases. Fully equipped laboratories manned by trained scientists will make possible analyses and experimentation. The field is so wide, still so almost completely untrod, that the possibilities of progress are without limit. We know what has come in other branches of medicine through discovery of the organic character of certain diseases. In mental disturbances much less progress has been made. And yet I am informed by scientific men that while no specific progress has so far been made, hope of success is by no means lacking. We know in certain fields of mental disorders what can be accomplished through the attainment of specific knowledge brought about by research. Twenty-five years ago general paresis was universally fatal and then through the discovery by a foreign scientist it was demonstrated that high blood temperatures brought about cure or improvement in a large number of cases. As a result, whereas before the discovery, fatal ending to the disease within a relatively short time was almost universal, today one-third of the patients thus treated are cured and another third show substantial improvement. This one discovery, outstanding in its importance and possibilities, should encourage us (scientists and laymen alike) to a further determination to carry on intensive scientific study. So much for scientific research.

The other step that seems to me must be undertaken is that of prevention; and here too this institution is going to play a great



rôle. One of the substantial troubles, I believe, in the treatment of mental disorders, is that the condition of the patient is permitted to go along for so long a time and become so definitely established that the possibilities of cure are vastly reduced. Unquestionably, many cases of mental disorder are due to ignorance, carelessness or maladjustment in school, home or place of work. Consultation, advice and treatment in the earlier stages of mental disorders would go far, in my opinion, to reduce the number of those who failing this, later on will almost inevitably require hospital treatment. This institution will have a large out-patient department in which patients suffering from the first stages of mental disorder may come for consultation and advice. It will have a special staff of social workers who will be helpful in adjusting the problems of school, home and workshop, which so frequently lead to more serious disorders. It will have special courses for the doctors in the State institutions and for the training of social workers and occupational therapy workers in State institutions; and finally it will offer special courses for students in training at the College of Physicians and Surgeons. All these activities must inevitably result in a higher standard of care for patients suffering from mental disorders both within State institutions and in the community as a whole.

Now there is another thing which I want to discuss briefly today. It seems to me—and I speak with some degree of knowledge, because I have worked among children for nearly thirty years—that at least a considerable part of the mental disorders shown by adults is the result of maladjustment or unwise treatment of children during their formative period. I have seen with my own eyes the results of maladjustment in child life and I have seen almost miraculous changes in children brought about through proper adjustment and through intelligent and sympathetic handling of their problems. It does not make any difference, in my opinion, whether a child lives on Fifth Avenue or in the meanest slums—maladjustment in a large number of cases inevitably takes its toll in nervousness, discontent and unhappiness. With the development of our great industrial age the school and the centers of recreation have assumed an increasingly important place in the life of the child. Some of our school systems have recognized this fact and appreciate the



importance of child psychology; but in my opinion the field is still almost unexplored. I would like to see set up in every school system of the State a specific department of child psychology with one or more trained psychologists or psychiatrists, able to study the problems of the child and insure readjustment where readjustment is necessary, and this activity could be extended as a matter of fact to training of teachers on the best methods of child guidance. In the average public school the classes are so large and the philosophy of child guidance so new, that frequently the teacher has not the time or the equipment to go far along these lines. Trained psychologists or psychiatrists connected with the school could do much in my opinion to bring about a larger, broader and more sympathetic understanding among the teaching staff, of the problems and possibilities of child guidance. Further, I believe that the normal schools of the State could greatly extend and broaden their activities along lines of child guidance, laying particular stress on what I believe to be no longer a theory but a proven fact, that much of what we consider discouraging in the social and intellectual development of the child is due to maladjustment of one kind or another.

In conclusion, I want to make just one more suggestion. This institution is going to have a clinic for out-patients, where people, children and adults, can come for consultation, advice and if necessary, treatment. The Department of Mental Hygiene and the State institutions are conducting, so far as practicable, departmental, institutional or traveling clinics in various localities of the State. People are invited and encouraged to come to these clinics with their problems and troubles. This is fine work and should be developed but it goes only a very little part of the way. I believe that there should be in every community of substantial size in the State, a permanent clinic of this character to which people mentally ill, but not in a condition serious enough to be admitted or committed to an institution, can go for help. There is no doubt that many nervous disorders if taken in time will yield to treatment and save vastly more serious consequences later on. After all, our greatest hope of solving this great problem of mental hygiene must lie in reasearch and prevention. Research must be done in great institutions of this kind whether they be private or public. Prevention, however, I think must be carried on successfully and to a very

marked degree in the schools and in community clinics. The whole question of mental hygiene is so close to me and of such outstanding importance that I shall always, whether I am in public life or not, do everything I can to improve the condition, physical and otherwise, of our public institutions; and yet I repeat that important as are these institutions and the quality and degree of treatment that is afforded to patients in their care, the great hope in the field of mental hygiene lies in research and prevention.

CHAIRMAN KIRBY: In concluding these Dedicatory Exercises, I wish to express on behalf of Commissioner Parsons and myself our warmest thanks to the distinguished speakers who have favored us with their presence here this morning and who have participated in our ceremonies by delivering such thoughtful and inspiring addresses.

The scientific sessions will begin this afternoon at two o'clock.

## REMINISCENCES AND PROSPECTS AT THE OPENING OF THE NEW YORK PSYCHIATRIC INSTITUTE AND HOSPITAL\*

BY ADOLF MEYER

We are here gathered to congratulate a great state and a great university on a great step forward, on "history in the making," and to participate at the cradle of new happenings in bringing greetings from psychiatric centers from many parts of the world.

Dr. Kirby's invitation to say on this delightful occasion a few words of reminiscence and of prospect aroused many memories of events and of dreams and also the sense of being in the midst of real new happenings. To find myself in a reunion of many old co-workers of New York and from afar, and to see the younger generation taking stock and launching out on a new development of actuality is a much cherished occasion for expressions of gratitude for enduring friendships, and congratulations on a new development.

Just twenty-seven years ago, the first of December, 1902, on the occasion of a kind of readjustment of this Institute, I stood on very modest ground, in the abandoned bakeshop of the Manhattan State Hospital on Ward's Island (taken over as our new quarters on leaving the laboratory of Madison Avenue, No. 1), addressing the superintendents of the New York State Hospitals, and opening a one-week conference with an address on the aims and plans of what then was still called the Pathological Institute of the New York State Hospitals. As I recently read over that introduction to my period of service, privately printed at the time, I found many statements of the historical development of the Institute and the goal as I saw it, still true today. Its work and plan had from 1895 turned from mere autopsy work to attempts at a "cellular biology" and an interest in neurone retraction theories and to the pathology of the living patient, to a frank inclusion of the mentally integrated functioning of the *person* (as well as the detached organs), and a frank devotion to the facts as found in our hospitals, to be studied in terms of experiments of nature, inviting creative and constructive experimental treatment.

We must realize that in those early days the Pathological Insti-

\* Presented at the Dedication of the Psychiatric Institute and Hospital at New York, December 8, 1929.

tute could have come into existence only through the earlier development of a strong State department in the later eighties, and, moreover, that as a matter of fact the Pathological Institute was a child born rather of criticism and of aspirations of competing if not actually conflicting forces rather than of the much later *self-realization of psychiatry* in its own comprehensive rights and with its own specific interests.

I wish I had time to give the well-deserved tribute to the first Commission, to Carlos F. MacDonald and the men who gathered around Ira Van Gieson; then the succession of Commissioners—Peter M. Wise with ideals influenced by Mosher; then Frederick Peterson, the poet and prophet and protagonist for the psychopathic hospital idea; then those who helped me and Hoch and Kirby give the Pathological Institute a clinical core, turning it into the Psychiatric Institute, with all the laboratory support and the cordial collaboration with the State hospitals. I should like to describe the share of the latter commissioners, Charles W. Pilgrim, William Mabon, Albert W. Ferris and their successors—not to speak of the faithful support by the superintendents and staffs of the State hospitals and the men who, like Thomas W. Salmon, from about 1915 on followed the lead of wholesome curiosity and utilization of what the histories of our patients might teach us concerning matters of prevention and work beyond the hospital system.

Psychiatry cannot be abstract. It stands here before us today: as a State development; as a university department; as an expression of the human needs of the day—and of its opportunities.

The autonomous development of psychiatry has a number of special sources:

1. Huge aggregations of patients not fitting into the ruthless unrelenting onmarch of a tough-minded and hard-boiled civilization created more and more staggering burdens.
2. The organization of a central management which graduated from the designation "State Commission in Lunacy" to that of "Department of Mental Hygiene" was bound to appeal to medical help and in time to shape its own experience.
3. Psychiatry, from having long been a mere branch of neurology in the university and medical school circles, became more and more a special branch, partly under the influence of European prog-

ress, but also very much through its own efforts with our American experience.

4. Instigated by a psychiatry intent on *using* its experience for prevention and health, mental hygiene developed out of the early efforts at home-visiting and after-care work to some extent as a kind of free lance, and parallel with it came

5. The child guidance movement, which arose from work with the juvenile courts.

6. Next I want to give due credit to the foundation and flourishing of a Neurological Institute which, before the Psychiatric Institute became an independent development outside of a State institution, showed the practical possibility of what seemed too difficult to contemplate twenty-five years ago.

It was necessary to furnish convincing examples to the State primarily accustomed to the mass treatment, and too easily satisfied with the opportunities already furnished by local admission wards such as the Bellevue Pavilion.

Nearly 30 years ago I was fully aware of the fact that one of the motives that led my friend and chief, Dr. Frederick Peterson, to offer most liberally his time and energy to the State as medical member of the Commission in Lunacy was the development of a psychopathic hospital.

In 1903 or '04, the Governor of the State of New York came near fulfilling the wish of that most earnest and farsighted advocate of psychopathic hospitals. Unfortunately Governor Odell's motive was frankly one radically opposed to what the State, to my mind, owed the cause. He seemed to have the idea that by concentrating on a fairly decent equipment for psychiatric work in a central institute and psychopathic hospital, he might cut down the bequests for more satisfactory equipment in the thirteen State hospitals. Distrust of such motives made me wary and I feared the times were not ripe for more than a partial realization of an institute under State care.

Massachusetts was on the point of developing its Boston Psychopathic Hospital (opened 1912) because it had no Bellevue Pavilion. Dr. Herdman's creation at Ann Arbor, Michigan, had barely been started. Other clinics began to arise as hospitals and research and teaching centers in Baltimore, in Iowa, in Colorado. But with



a fairly efficient admission service at Bellevue Hospital, and the State hospital closely at hand, it was a great question whether a psychopathic hospital as a State institution would not largely tend to create an undesirable contrast to the existing State hospitals without being assured of the support needed for a research and teaching center.

What was and is wanted is not a *reduction* of the creative work of the other institutions of the State service, but a *supplementing*. We were not then ready to make sure that the State hospitals and psychiatry generally had quite found themselves as a truly autonomous domain.

Today fortunately there is no lack of cooperation any longer on the part of the enlightened members of the community. The public appreciates more of what the State hospitals actually do. Moreover, the experience with field work led many of the New York State superintendents and Dr. Jackson and Dr. Pike in Pennsylvania and Dr. Ebaugh in Colorado to arrange in various towns consultation days which became most appreciated exchanges of help between State and local community. From time to time special problems of special localities can now be taken up with pertinent authorities, schools, health officers, social agencies and recreation centers, and worked out as examples for wider circles.

A real question arises as to the extent to which authority and expenses shall be shared by State and locality, and how State care and local care and initiative shall work together. We have here also a question of so-called State medicine, and its relation to the private physician and to towns and counties.

Very soon after the first start of the Pathological Institute there was a local development in the creation of Pavilion F of the Albany General Hospital, the significance of which may well deserve a special mention. Dr. Jesse Montgomery Mosher, who had his first training at Utica and Willard and at the St. Lawrence Hospital, clearly was interested in the living patients and practical psychiatry from the start. I well remember my chief, Dr. Gapen, coming home to our hospital at Kankakee, Ill., from the memorable 1894 meeting of the Association of Superintendents in Philadelphia and a trip east with his resentment of Weir Mitchell's well intended address, but also with an enthusiastic impression of Dr. Mosher's

work. And a visitor, Dr. Stansfield, later of the Claybury Asylum near London, similarly brought us a significant impression from Ogdensburg of the man who soon after became the pioneer professor of psychiatry of Albany Medical College and the organizer of the well-known Pavilion F. This man and his workshop long remained an isolated example of what communities might do—perhaps because of the tenacity of a non-comprising independence on the part of its originator.

Dr. Mosher started his Pavilion F as a provision of the community to take care of patients not requiring, and not asking for, commitment. He was jealously determined to safeguard his enterprise from being absorbed in the process of centralization and control. But for the resulting absence of real contact with the State, it should long have been one of the most telling and infectious samples of progress.

The *centralization* in the form of State care and State supervision most certainly has to be *balanced* by an equally effective development of *local work*.

In New York State, where, through efforts of Dr. William L. Russell, about 1909 the health officers (instead of the supervisors of the poor) became responsible for the care of patients pending admission to the State hospitals, the State hospitals in their respective districts are in a position to offer much advice and help in the development of the necessary provisions. It is unfortunate that too often local authorities actually *build* provisions without consultation with centers of experience. Real atrocities are apt to result, difficult to change. With a wise pulling together, the development of sample organizations by the State department, and the spreading of the data among health authorities, will tend to furnish patterns for comparison and imitation, types of provisions from the most economic to the more favored, privately supported or tax-supported, according to the capacities and the genius of the various communities.

This New York State Psychiatric Institute and Hospital is and should be in a way a privileged center among the State hospitals and local institutions of the State, but not in an invidious contrast. In order to do its best work it will have to be free to concentrate on select types of *investigation* in addition to its service as an institute

of *teaching* and *training* for the best type of psychiatric work. Besides its own research staff it has an opportunity to get physicians from the State institutions for sufficiently prolonged periods to offer practical and theoretical experience such as our centers of special work in any other branch of medicine consider necessary. Indeed the day may well come when every physician of the State institutions and in local work will be expected to have such experience.

In all this, I should like to emphasize a deep conviction of mine; viz., that in the end the *State institutions* will continue to determine the sense and spirit of psychiatry in this country—not by claiming to dominate and absorb the work, but by bringing their unique experience within the reach of the physicians and the public of their *districts*. The larger State institutions follow the cases through all the stages to where the clinical work can be brought to the final test of practically obligatory autopsy study. They are in a position to show the communities not only *the best modern work but also the failures* of local civilization. Populous centers in their districts will have to receive visits for *psychiatric consultation days*, bringing also perspective and knowledge of the number and types of disorders under care in a district at the time, and the individuals under after-care supervision or endangered by heredity and local sources of danger. With such a background of broad comprehensive information, the consultations about patients not as yet in need of hospital care and the *work in schools and industries and courts* will receive a new meaning and true perspective—with an interdependence of State and local interests of the utmost importance for any really fruitful work. Communities have to learn what they *produce* in the way of mental problems and waste of human opportunities, and with such knowledge they will rise from mere charity and mere mending, or hasty propaganda, to well balanced early care, prevention and general gain of health, efficiency and happiness.

We cannot expect to change mankind *completely*. There will always be a great variety of human beings and of failures in health and life. But we are learning to *use* experience to *avoid avoidable* waste and *avoidable* unhappiness and we are learning to turn the “suffering from experiments of nature” into a growing



amount of creative work, helping not only the sick but those who now just drift, not knowing how much better off they *might* be.

New York is already showing a great development of the spirit of interest and support concerning the mental hygiene and psychiatric service to the communities and a real liberality. From the master institution we inaugurate today, to the type of the Syracuse University Clinic, and the Pavilion F of Albany, and to obligatory though perhaps more modest provisions for delirious and other cases in the average hospital and the care of depressions and excitements pending commitment, there is in New York State almost every possible pattern.

My plea goes in the direction of seeing in the development of the Institute and its hospital wards and research departments an ever new *stimulus to the various districts* of the State and their respective hospitals and local provisions. A balance between centralization and decentralization will become possible through providing, not only for all the State hospital physicians but for outsiders as well, liberal access to training by special courses and by periods of residence in the Institute Hospital and actual work in its out-patient and in-patient services.

Not *all* physicians can be equally interested and equally fitted for *all* aspects of the work. There must be a division of labor and a division of training, including an encouragement toward a development of simple and practical types of local care and local work, and no lowering of the standards of the already existing plants. We thus come here today to see how New York State and a great university have united to achieve the fulfillment of the dreams of a great and successful dreamer, Frederick Peterson, and of Ira Van Gieson's Correlation of Sciences and the aims of those who worked for an *autonomous development of psychiatry*.

We see in it the union of *several great developments*:

A clearer understanding of the intrinsic needs of psychiatry and of the intrinsic needs also of a university with the modern turn towards humanism; the combination of service to patients, teaching and research, and also the growing realization of needs of medicine generally shown in the *interest in the whole man and his functions*, besides the function of the *parts*.

There might be room for an important discussion as to the

*relation of psychiatry and neurology* within the university at this point. At Columbia, the Neurological Institute is based on the groupings of practice rather than on research distinctions as it includes all the psychiatry that can be handled by not specifically institutional treatment. At Johns Hopkins, the tendency is to keep within psychiatry the teaching and investigation of all the essential "personality functions" and to cultivate in *neurology* that which has to center in the *consideration of the parts of the nervous system and its experimental study*.

The *university* is also involved in a broader way. In a time when whole universities seem to glory in a recasting of their departmental groupings in the direction of making a *department of human relations* the chief goal of their most vital interests, psychiatry finds itself pushed into the very center of new expectations and tasks. Here it will be especially important for psychiatry not to inflate itself to the point of losing its real ground.

In this respect we are especially glad to see here the psychiatric possibilities shaped on safe ground: a truly psychiatric institute with safe tradition, and solid contact with a large medical center and devoted to human beings open to complete study. Man is an evasive entity, only rarely caught in difficulties in which he would become willing to surrender to a complete and unreserved study as a personality. We are unfortunately too apt to plunge too one-sidedly upon the helpless child and perhaps now upon the criminal, and are very one-sided with regard to the study of the as yet untamed and often undisciplined average adult, who still allows himself largely to be represented or misrepresented in novels and in the over-specialized accounts of special schools, rather than on ground of thorough-going studies such as objective psychiatry of today would demand.

The Psychiatric Institute is an illustration of the very spirit of the very *philosophy* of this country: the tychism or philosophy of chance, of Charles S. Peirce, the pluralism of William James, the instrumentalism of John Dewey, and the basic confidence in the blending of practical achievement and contribution to the basic sciences and the safest formulation and command of the facts as found.

When today I read the Gifford lectures of our greatest shaper

and exponent of American philosophical thought, John Dewey's "The Quest for Certainty," I cannot help feeling that psychiatry has well kept up with the procession, indeed has done its share in leadership in one of the greatest revolutions not only in medicine, but in the transition from medievalism and its transient reversal into narrow materialism to the *beginnings of vigorous and open objectivism of science and of life* (limiting subjectivism to where it actually occurs). From an idolatry of thought and abstraction, we are turning to an objective, not merely descriptive and verbal but creative and constructive mastery of the facts and nature of living man. Turning from classification of words but loosely correlated with facts, we aim to *deal with the living objects, letting the experiments of nature and of man speak* as far as possible with increasing economy of words and mere concepts—even where we are dealing so largely with the verbal functioning of the subjects of our study themselves as is the case in psychiatry.

We see psychiatry as a human concern in action, not something merely to be read about or used in propaganda, but *psychiatry alive and active* in its various branches and relations; *not an oracle of teaching, but a center for participation in work.*

There is no pretense of the impossible. Just as man can never bring into action at any one time and in any one setting all that may constitute the person, but only samples, so it will be even with our very complete institutes; but the samples will be *alive*, and open to participation by those who promise fitness and worthwhileness.

Thus we come here to a privileged center cultivating its contacts with a big university and the huge metropolis, but also with the State system and its many different centers making up the huge totality of psychiatric needs and opportunities. It should not have to try to represent them all. It will always be but one group of samples of the best of each kind. This will mean choice and the courage of concentration, the only safeguard against impossible distractions. If this is the spirit within the Institute and throughout the State and the university, we can look forward to a happy and really important addition to the great contemporary endeavor of mankind.

It is a happy occasion that brings together representatives of kindred endeavor from many lands. Psychiatry to be substantial

has to be very intimate as well as broad. We like to see the local spirit of French and German and Swiss and Scotch and English psychiatry and the work in the many other world theaters. The orient, the occident, the north and the south, the old and the new civilizations will all become more and more articulate not only in good writers and workers but in an exchange of workers: there will always be many types of developments. But the great fact characterizing our times lies in the concreteness of problems and workmanship and the surrender of the "absolutes" as goals of salvation, with a corresponding growth of courage and at the same time modesty about the individual realizations, and the use of generalization as a medium of contact, as a means to many ends, always having to lead to concrete work again.

To Dr. Parsons and to Dr. Kirby and his staff and to the heads and staffs of the State institutions and the workers in local fields, I beg to express my congratulations on the work already achieved and on the new opportunities. And to the young physicians and the medical students of this country, I should like to say that few opportunities for a training with a wide range of individual outlook and opportunities can rival those of New York State.

May your ranks attract the best type and the fullest quota of workers to fill the vacancies of staffs and the demand of the localities for the necessary trained personnel.

A splendid record of work and progress has been achieved since the opening of Van Gieson's Institute. We in other parts of the country are looking to the collaboration of the Columbia Medical Center and the New York Psychiatric Institute and to the State of New York with ever-renewed interest, for example and inspiration.

## PSYCHE AND PSYCHOID\*

### *A Scientific Conception of the Relations Between Psyche and Body*

BY PROFESSOR EUGEN BLEULER,  
UNIVERSITY OF ZURICH

In order to understand his patients a psychiatrist must be thoroughly acquainted with both their psychic and physical conditions. Every day he observes that with bodily diseases, and particularly with changes in the brain, the psychic functions are altered and, on the other hand, that the psyche exercises great influence over physical functions. Diseases that we call "nervous" are mostly disturbances emanating from affect-laden ideas.

The closer we consider our psyche and the physiology of our bodies, the more clearly do we perceive that both of them act on the same principles. Our psyche, it is true, is considered to have the privilege of acting, not causally, as in the physico-chemical world, but finally, i. e., for motives that lie in the future, in an aim that has still to be attained. But do we not see the same thing in the body? Every occurrence there, too, has a final orientation and often a sureness of aim and a complexity that we could not attain with all our intelligence. Think for a moment of the precision with which the blood stream is directed into the various organs, with their almost constantly changing needs, or of the formation of the lens of the eye with its refraction index changing from the center to the rim in all of the millions of cells, according to complicated physical laws. Of course the organism sometimes follows paths that seem awkward to us. But does man, with all his intelligence, never indulge in nonsense? Civilized men only too often employ their intellect in ruining themselves or their species. In thousands of cases, however, when we come across an organ or a function in any living creature, we instinctively ask ourselves "What is it for?" and as a rule we get a reply and rightly believe that we then "understand" that organ or function. The activity possessed by every organism, its instincts, is so ordered that life is maintained as a matter of course; otherwise it would not exist. In the domain of our psyche our *intelligence* should so guide us that in each case our actions follow this general principle. In the following remarks we shall see how the bodily organism fulfils the same task.

\* Presented at the Dedication of the Psychiatric Institute and Hospital at New York, December 3, 1929.



Let us first of all observe the origin of some expedient actions in the human psyche, which with respect to concrete intellectual performance is still an unwritten page at birth. When the new-born baby is uncomfortable, hungry or wet, it cries by reflex action. Its mother comes and satisfies its hunger, or puts dry clothes on it. The child likes to have its mother look after it, and if she hurries to its cradle at every cry, but only then, it begins to cry without any actual need. Later on, perhaps, the child seizes the flame of a candle, burns its fingers, and draws them back. Now its mentality is so changed that the mere approach of the flame will act like its touch, and the child will draw its hand back, when the flame is only moved towards it.

If we offer food in the shape of fine grains to the simple organism of an infusorium, they are taken into the mouth and conveyed into the body, where they are digested; the remainder is thrust away. If, however, indigestible particles are offered the infusorium, these are likewise taken in, but are always thrust away more rapidly, and subsequently are no longer conveyed in, and finally are thrust aside, as soon as they are within reach of the animalculum. Like the infant, therefore, the infusorium has formed by experience a functional connection between the stimulus of certain grain forms and indigestibility and the subsequent rejection. If at one time nutritive grains are given in a certain size or shape, and at another, indigestible ones in another size or shape, all the digestible grains will be taken after a time, while the indigestible ones will be thrust aside before tested for their digestibility.

Quite similar changes are likewise produced in the *bodies* of human beings and higher animals. Without our noticing it, the organism adapts itself a thousand-fold to unusual needs, heat and cold, increased or diminished use of certain bodily organs, change of food, etc. At first the reactions easily overshoot their mark, or they are too slight; gradually, however, they adjust themselves to the most favorable point. It is exactly as if the organism were "learning" to select the conditions most favorable to it. In any case here we are in the presence of a function similar to human memory, which creates new connections, just as the infusorium begins to distinguish the coarse from the fine grains and connects size with digestibility.



Whenever we speak of "memory" or "recollection" we always think of it as a conscious function. In the psychological conceptions of the adult we should probably describe the infant's reactions like this: The infant likes its mother to come; it has *learned by experience* that it can call her by crying; "therefore" it cries frequently. It is, however, impossible for a new-born child, which has no conception whatever of the things of this world, to "reflect" in this way. We should therefore have to describe the process without any presupposition as follows: By the arrival of its mother when it cried, a change took place in the childish psyche, which is demonstrated by the fact that crying occurs on the mere inclination to have the mother near. (I purposely say "inclination" and not "wish", in order to show that this factor, too, need not be conscious.) As psychologists say, an "association" has been formed between the inclination to have the mother near and the act of crying—the inclination for the mother "occasions" the cry.

We see the same thing with the infusorium. Two different associations have been formed: to eat the small grains and to thrust aside the big grains. With human beings we should call the corresponding reactions "selective actions", but with primitive organisms we cannot conceive of the reactions as expressions of conscious volition. In any case it has not been *proved* that they arise out of conscious volition. Even with the infant we do not know whether it has already advanced so far in the first weeks that something acts in it like a conscious memory. It has certainly nothing to do with consciousness, if, shortly after birth the baby learns to estimate the time and accustoms itself to demand food only at certain intervals. Neither can consciousness be attributed to plants, and yet mimosas let themselves be trained to carry out daily movements of the leaves in a new rhythm.

There is something common to all these facts that is precisely the essential thing for the life of the organism; an influence of any kind causes a reaction, but in addition, a permanent change which subsequently shapes the reactions more favorable in similar circumstances, and for instance, sets them going by means of accompanying stimuli, and no longer merely by the innately effective ones. *The effects on the organism are exactly the same as those of the memory of our psyche.* The only difference is that when we

speak of memory, as in the case of the burnt child who dreads the fire, we are thinking of a conscious function, while in the case of the simplest animals and the newly-born child, we must leave the question of consciousness open; with respect to the vegetative functions we are compelled to deny its existence.

We must consequently have a conception that comprises the memory without considering whether its functions are conscious or not. Here we meet with the needs of psychopathology, which likewise compel us to presume important unconscious functions even in the human psyche. Semon has taken the memory conception which considers neither the conscious nor the unconscious, and called it *mneme*; he has demonstrated that all living matter has *mneme*. The permanent changes, caused by an experience, he called *engrammes*. Of their nature we know nothing. The springing into activity of the *engrammes* is called *ekphoria*. If we remember things, and if the infusorium selects the finer particles on the grounds of previous experience, this happens through the *ekphoria*.

Hence the *mneme*, by the simple method of memory, permits of an adaptation, a "learning", expressed in the sense of human psychology, of a "purposeful action." The future, however, cannot have any direct influence; we can know it only on the analogy of the experience fixed in the memory. A thing without *mneme* has neither past, present, nor future—only a thing with *mneme* can act with a purpose.

The greatest part of our psychic activity, particularly all intelligence, is based on memory, or *mneme*. In the conception of memory lies at the same time that of association, the fundamental process of thinking. If experiences are in some way preserved in the form of *engrammes* and are revived in the shape of memories or customary actions, their associations are naturally revived at the same time. Among other things, these associations determine the paths of our trains of thought.

In the psychic, as in the physical functions, however, there are *associative connections* occurring not only *one after another* but also *simultaneously*. When I am writing, the real perception of paper, pen, etc., in connection with the previously acquired *engrammes* of the writing movements for each letter, together

with the conception of the ideas to be written, direct my actions. Exactly the same thing, but simpler and therefore easier to understand, can be seen in a mere reflex, which starts from the spinal cord and has nothing to do with the psyche. Just as does a human body in which the spinal cord has been separated from the higher centers, so does a frog without a brain react to an unpleasant skin irritation with its nearest foot. The determinant of the movement, in addition to the seat of pain, is also the starting place of the reacting foot; if the leg is held to the front, quite different muscles must be brought into play for the same purpose than when the leg is at the back. The nervous stimuli arriving at the spinal cord, which on the one hand announce the place of the skin irritation, and on the other hand the starting point of the foot, are associated to a *uniform resulting action*, which is directed into the corresponding muscle. The soulless spinal cord in this case accomplishes exactly the same thing as the psyche when we consciously ward off a fly. We feel and know by centripetal nerve irritation where the fly is, and whether we must move our arm upwards or downwards to the point of excitation, and we carry out our defensive action on this basis. (It may be remarked by the way that one great part of the mechanism, for instance, the distribution of energy to the individual muscles, is completely unconscious, so that at least in an important part of the actions there is ascertained not only a similarity but even identity with the reflex of the spinal cord.)

We also find a similar cooperation in all *vegetative functions*. When digesting, when straining brain or muscle, there is a different distribution of blood in the whole body for each case, another tonus, another type of breathing, etc. The collaboration of different parts is best seen in regenerations. I once crushed the last phalange of a finger. A system of small cracks went through skin and flesh to the bone, and the phalange was lengthened by at least six millimeters. The cracks healed with granulations. Then, after a rest of several weeks, the work of the restoration of shape began rather suddenly, so that after about two months the finger had regained exactly its previous shape and size. In order to form this shape each of the new cells had to undertake a definite task, together with the remainder of the old ones, and *thereby to adjust itself to*

*the action of all the others.* It had to act as if it "knew" the shape and size aimed at, and what work and shaping each of the other cells was undertaking at each instant. A cell, however, cannot "know" in the sense of our psyche, nor possess consciousness or the power of reflection, but it must obtain some kind of "knowledge" of the form to be reconstructed, and a sort of "news" of the doings of the others. We must also imagine that the cells distant from the injured part must participate in the work of reconstruction by supplying daughter cells and chemical material; the supply of blood must become different even with them, and, to speak precisely, *the whole body must take an active or a passive part in its regeneration*, i. e., in some way must feel its influences and react to them. By this news service the body, therefore, particularly the parts adjoining the wound, becomes a functional unit for the purpose of regeneration, as not only each actively participating cell undertakes quite a definite part adapted to circumstances from one moment to the other, but *also the inactive part is held back from reacting*. Of course in the normal development of every living being, there likewise takes place the same process which is to be conceived as a serial *ekphoria* of the development *engrammes*, which we call *genes*. How far this influence goes is seen by the fact that in certain circumstances in the morula, in the multiple-celled embryo of a sea urchin, or in an egg, a part of the material can be shifted, and then, under the influence of the new surroundings, it produces, for example, skin instead of brain. In the triton, the removed lens is replaced from the iris by imitation of the normal manner of originating, which is otherwise not the task of the iris.

The news service is, of course, something very complicated. Indeed a cell cannot directly point out to every other cell what it is doing, and still less what the other has to do. The news will consequently have to be transformed into a symbol, just as the tones in the telephone are changed into electric oscillations, or as in the retina the light stimuli are transformed into nerve currents, and this symbol must then find a resonance in the receiving cell, i. e., be so "correctly understood" and used as directive of its own performance, just as we utilize optical perceptions when walking.

Further, the news would be of no use if all the cells had not the same *main object* of restoring the normal shape of the injured fin-

ger. This is possible only if all the cells, even the remotest, have something like a knowledge of the proper shaping of the body, and of what is now lacking, as if, so to speak, they knew the whole building plan, which has in all respects, with the exception of the conscious quality, the properties of an *idea* which the human being consciously realizes. The idea of the plan of a house arises among human beings (with a predominance of optical conceptions) as the association of a number of individual *engrammes* of sense perceptions, and with the *abstraction* of particulars, whereby, for instance a room or the rounding-off of a cupola, figure as units of a secondary order in the whole project. The same thing must be the case in the building plan, for instance, of the spherical head of the humerus; to the organism the plan will be composed of ingredients of the following nature: a flat surface which, with angular movements, glides in all directions on another surface without lifting itself, the upper surface-cells of which stand radially in the same angle to each other, and which consists outwardly of cartilaginous substance, and inwardly of small bone trabeculae, etc., all of which are associated in a definite connection, and abstracted from chance-properties of the individual sensations of which the experience of these properties is composed.

Indeed an inanimate crystal can replace its defects, or it can change itself from a big damaged crystal into a small perfect one. We are, however, acquainted with the simple molecular forces that cause this, and so we also know that mere molecular force cannot form any organs in the living colloid substance; the colloids do not have the plasticity which enables for instance the regeneration of a whole planarid from a cut-off piece in a way that the existing substance creates a proportionate organism in which more or less substance is conveyed to the different organs, *according to their vital importance*. We see here and everywhere in bodily functions a purposeful plasticity such as molecular forces never have.

Like the psyche, the body in certain circumstances can follow unusual paths. If, for example, a dog has lost the central portion of the tibia, it can, under certain circumstances, restore support to the limb by thickening the fibula, instead of by the usual formation of bone in the gap of the tibia.

What I have just said refers to only a few examples in an almost



endless number of experiences which prove a close relation in the nature of somatic and psychic processes. The only important difference of the two series consists in the fact that each of us in his own psychic functions perceives the consciousness, and presumes on compelling grounds of analogy, that it exists in other human beings and higher animals, but not for bodily functions. (Now, it is not impossible to understand the conscious property from the common mechanism, but this is not the place to go into this matter.) While we know the *psychic functions*, not only in other beings in their exterior actions, but also in ourselves interiorly by introspection, we can infer the same nature for the *bodily* ones by their action and their analogy with the psychic ones, and it is characteristic that if we wish to designate this nature briefly, we can do so only in expressions taken from the psyche. We have good grounds for saying that a body "is aware of" an injury, if we ascertain that it is transposed by the injury into a purposeful reaction tending towards healing. Or we may say that the cell at the rim of the injury "knows" that the wound exists and it is "striving" to counterbalance this defect, by which we mean the fact that by the injury it is placed in a position in which it helps to replace the defect; and because a regeneration occurs in a previously exactly determined direction, and with constant adaptation to momentary circumstances, exactly as the builder works on a plan, we say it *knows* the plan of the body or of the part to be replaced. ("Abstraction" in bodily functions means that they do not react on the physical sum of certain stimuli, but as if only a part of the stimuli were present, or as if it had learned "by experience" to pick out of a series of combinations of stimuli the one important for the organism.) We speak of "memory" or "mneme" in the case of the bodily functions, because we find *exactly the same elementary processes* as in the memory of the psyche. (Repetition produces an exercise and a summarizing of efficacy, the latter even of subliminal stimuli, a habituation now in the direction of lack of sensibility, and now in that of an increased sensibility to similar experiences, abbreviations and other simplifications of a function; in the case of connected experiences the other part is associated by partial revival (wish for the mother—crying).

The adaptation of the infusorium to experiences is fundamentally



the same as if our psyche learned by experience to accept certain things as food and to refuse others, or as if, when thinking, it concluded: Toadstools are poisonous; that is a toadstool, it is consequently poisonous.

The identity of the two series in the "integration" of the function is of particular importance. The psyche—apart from its experience content—consists of a number of instincts which, however, in normal circumstances, are so firmly bound up into a unit that philosophy can call them "punctiform". Bodily functions, too, are integrated to a high degree, not only the nervous ones but also all the others; all vegetative functions, digestion, circulation, etc., are dependent on one another and, taken exactly, the body reacts in every case even with simple reflexes, but only relatively as has been demonstrated, now more with this, and now more with that organ. Hence we have good grounds for bringing the bodily functions, too, under *one* conception. This summary, the body soul, I have called the *psychoïd*.

As we ascertain in the psychoïd, with the exception of consciousness, all the elementary functions that we find in the psyche, and in the latter all that are in the former, we cannot do otherwise than regard the psyche as a *specialization of the psychoïd* of the organism, exactly as the bearer of the psyche, the nervous system, has only taken over a specialization of functions which were previously existing in the living protoplasm: stimuli and reactions, conduction of the stimuli, working up of the stimuli for more and more suitable reactions, with the collaboration of the *engrammes* of previous experiences.

Hence with human beings we have a number of reactions which are half psychoïd and half psychic, or that cannot be placed with certainty in the one or the other series of functions. When we scratch ourselves or catch hold of the dentist's forceps when he is about to extract a tooth, how much of this is reflex action, and how much is conscious action? At any rate there is a difference in each individual case. Swallowing may be an act of volition or it may be a reflex. Is falling asleep an action or a psychoïd act? In Pawlow's association reflexes we connect psychic and psychoïd functions into one unit which, if we descend in the animal world, appears finally to be merely psychoïd. Bechterew has also called thinking an asso-

ciation reflex. He is right in so far that thinking is nothing more than purposefully ordered *ekphoria* through associations acquired by experience. If we repeat an action which originally arose entirely in the conscious milieu, it finally becomes automatic, and in many cases acquires the character of a reflex. Corporal and psychic functions constantly influence one another in the highest degree, and in suggestion we actually have a medium for arbitrarily changing, for instance, the quality of the gastric juices and the chemical conditions of the blood, because psychic conceptions may have the whole value of psychoid processes, etc.

This manner of observation not only throws a light on the nature of our soul, but is particularly fertile with respect to the functions of the psychoid in the *development of the species*.

In Europe it has become a dogma that there is no inheritance of acquired characteristics and that such inheritance is impossible, so that, as in the case of other dogmas, scientists feel themselves freed of the onus of proof and gaily go on making assertions. In reality, there is not a shadow of proof in favor of this dogma, and people forget that evolution without the inheritance of acquired characteristics would simply be out of the question. People speak of chance without inquiring whether chance could be responsible for such a performance or not. Even now, in spite of all, one of the latest leading works formulates as follows: the frog does not get lungs and legs because it is compelled to go on land, but it goes on land because it has accidentally lost its gills and fins and obtained in their stead organs suited for living on land. This conception premises an endless series of improbabilities. The water animal that has lost its gills is a poor monster which will drown even if it has by chance obtained lungs, and if it should happen to be thrown on land, it would suffocate, because it would not know what to do with its lungs; and it would starve because it would not find the food that its instincts and reflexes could procure it, and because it could not reach it with its fins. In a word, innumerable functions and chemisms and organs would have to be transferred simultaneously in a definite direction in order to make the creature capable of living. One single necessary reflex requires a tangle of nerve fibres in a precisely fixed order, and every individual fibre would have not only to arise by chance at the right time, but also to be so

placed that it could, with the others, exercise its functions adapted to special circumstances, and individually exercise other adapted functions. And in a thousand years, if one of the million units were created, before the other million partial functions and organs had been adjusted by chance from, literally, an innumerable quantity of possibilities, the first part would have long since fallen a victim to change, and the development of the species would have to begin all over again. Even if a thousand new properties were present at one and the same time, they would not form a vital organism, but rather a chaos of contradictory, or in any case, disconnected functions and organs; for active reaction of the individual functions on each other, as we see it among individuals, would indeed be out of the question in the succession of generations. Never, however, have we come across even a hint of a new organ that was not in harmonious agreement with all the other properties of its bearer.

But it is easy to prove that chance is not capable of doing this. Among several reasons I mention only this one: If we premise, for instance, that even in quite a small organism like an erythroptis agillis the anatomical parts of the eye, cornea, lens, retina, etc., could really arise by accident, there would be a possibility of no more than one to a figure with 40 digits, that the physical composition would be correct and that the camera would be utilizable. Even then we have taken into consideration only a minimum part of the complications. A not-to-be-despised series of facts points to the possibility of inheriting acquired characteristics, but the dogma prevents researchers from approaching them more closely.

How is such heredity conceivable? We have seen that every bodily part must in some way obtain knowledge of what is happening in other parts of the body, and what is needed there; and that potentially it tries to satisfy this need. Modern theoreticians of heredity boldly promise that germs form an exception, *and this only because, with mostly false methods they cannot prove this kind of heredity*. But they should reflect that there are no such exceptions in nature, which is more concerned with preserving the species than the individual. Yet she is said actively to exclude the most important function, the propagation of the species, from the benefits of experience and to exclude the most efficient agent in the development and maintenance of the living being, to which all the other

physical or psychic functions are adjusted, whereas since the specialization of the functions and organs, they all maintain the harmony of the organism in living contact with each other! How could natural selection allow such a harmful thing to develop? We must consequently premise from this consideration—and I cannot mention others today—that the germ-cells as well as the cells of the body are aware of the needs of the organism and its new acquisitions, and give posterity the benefit of these experiences.

Everybody knows to what extent organs adapt themselves to the needs of the individual. Muscles that are frequently used, grow stronger; if an artery refuses to act, others undertake to convey blood to the endangered organ by expanding, first functionally and then anatomically. Take, for instance, a particular species, the ancestor of the horse, the *protohippus*, which was compelled for some reasons from a certain period onwards to jump more than formerly. Long limbs are needed for jumping, as we find them in the horse, the cricket, and the flea. The *protohippus*, however, has only two not very long segments and quite a short foot. Hence it must be a necessity for its psychoid, when jumping, to stretch the longest toe both functionally and anatomically as far as possible, and, in exceptional cases it can attain a perceptible extension of a section of a limb in only one generation, as may be seen with mammals, which, owing to the loss of the front legs in youth, move along by hopping. The experience that the limb has become longer, and that this prolongation is something favorable, is also communicated to the germs and taken by them into their *engrammes-treasury*, so that the psychoid of the next generation also does what it can to extend the foot. Thus, over a number of intermediary forms, our present horse has arisen out of the *protohippus*. (If the most favorable length of the middle toe has been reached, unfavorable chance variations are corrected in the same way, or are eliminated by selection. Thus a certain stability at the fittest point is obtained, which continues, till altered circumstances make new changes necessary.)

Yet even without stabilizing regulation, it must not be expected that important characteristics can be changed in a few generations. The psyche must look after individual adaptation; the *species* must not react on chance happenings with an alteration. If a human

being is cold, his psyche can put a fur on his body, but the psychoid must not let one grow there, or else he would be in an embarrassing situation on the next warm day.

Among the many objections made to the acceptance of a purposeful inheritance of acquired characteristics I do not know of any that will hold water. It is said, for instance, that a salamander never loses the lens of its eye under natural conditions. If, however, it does lose its lens in the laboratory and the lens is regenerated, it is of no use to the salamander, because it is not transparent enough. But you must not think of a particular gene, especially for regenerating a lens, but every organism has a *general tendency* to compensate injuries and defects, and it does so everywhere as well as it can, and the more specially an animal and its organs are developed, the more difficult and consequently more insufficient must the regeneration become. It has been objected to Darwin's mimicry-theory that slight equivalents to the color of the surroundings cannot have any selective action. In reality, however, everything living, up to the human being, in addition to an obvious tendency to brag and show off, has the very comprehensible inclination to make itself imperceptible; and this is expressed everywhere, *even without consideration of the momentary benefit* exactly like a reflex. And if it is objected that butterflies are so seldom eaten by birds that a mimicry protection can have no biological significance, one can also imagine that it is precisely the rarity of such an occurrence which speaks, among other things, in favor of the efficacy of the protection.

I have been able to give you only the broad lines of a conception of the connection between corporal and mental functions which, indeed, does not entirely solve the so-called riddles which have been introduced mysteriously into these things, but it makes them unnecessary. Think, for example, of the instincts or the technically remarkable arrangement of the little bone trabeculae, or the articular surfaces. Our psyche could not create them for it commands only the experiences of a few decades, whilst the far more complicated psychoid has been utilizing the treasures of experience since the existence of life, since periods which we cannot even dimly estimate.

Of course, in a short paper, I could not bring proofs of my



remarks, but perhaps I may be allowed to call your attention to the fact that I have put together the inferences in a little book, "Die Psychoide"\*. The conception helps us to understand the development of the psyche from bodily functions and at the same time the development of the species and of the individual; it shows how bodily functions must be equally as purposeful as the deliberate actions of human beings. It also makes—and I have not touched on this point here—the origin of life from the physical world at least conceivable, and gives us, to go back to our starting point, in the knowledge of the most elementary functions of the human psyche, new points of support for better understanding of the relations of mind and body and of the pathology of the soul. Although, as a matter of fact, all these theories form a uniform chain of facts and reflections, European biologists do not for the most part agree with my views on the inheritance of acquired characteristics. As they cannot give any motives for their attitude, I believe that our traditional trains of thought are at fault, and therefore I am happy to be able to place these matters before American scientists, who are free from our prejudices and obsolete traditions.

\* Springer, Berlin, 1925.



## PSYCHIATRIC IMPONDERABLES\*

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We have gathered together to dedicate this building. In this country and, perhaps particularly in this city, the dedication of a building is neither uncommon nor remarkable. Another tower of masonry reaching toward the skies! Yet, it may be truthfully asserted that this dedication will live long in our memories and it will be remarked more than casually in the minds of those who are to come after us. This building marks an important milestone of psychiatric progress. In a larger sense we have not come here to dedicate an impressive pile of skillfully fashioned stone. We have come to pay homage to a science which has definitely emerged from its dark ages and now stands as a powerful force for human good and for constructive achievement. Now we dedicate this science and its fruits to an even wider and greater usefulness. Of these things this building is a striking symbol. For this reason, we are contemplating not merely a collection of stone and mortar. There is life here, and faith and energy and spirit which begin at once to animate this structure and make it something more than an addition to the sky line of a great metropolis.

What has been the inspiration for this institute and how is it going to fulfill its destiny? Contrary to general opinion evolution does not march forward with evenly measured tread. Seemingly there are periods of almost stagnation and there are epoch-making strides. For instance, when fire was first struck forth and applied for a useful purpose, there was accomplished something which moved civilization ahead in a signal fashion. It is only within comparatively recent times—within the span of a few decades, that psychiatry has risen from the ashes of its former ignorance, superstition and crudity. Practically within the time of our recollection a somewhat cold, formal and objective discipline has given way to a warm and insatiable curiosity and ceaseless inquiry into the nature of the mechanisms which underly mental symptoms; neatly pigeon-

\*Delivered at the dedicatory ceremony and the scientific sessions at the New York State Psychiatric Institute and Hospital, December 4, 1929.

holed groups of psychoses are retained as landmarks but the battery of attention is *focussed* on the sick man or woman as an individual; the interest and value of activities which psychiatry has fostered outside of institutions rival and even eclipse intra-mural activities; that intangible but very real quality, the human personality, is being actively studied not only in relation to mental disease but also is being evaluated in its enormous potentialities for construction or destruction, both for the individual and for the environment in which he lives; every resource of related science and the brains and equipment of the laboratories is being directed in an intensive attack on the organic aspects of mental disease; physical habitus is being correlated with personality and the various psychotic possibilities; mental disease is being closely scrutinized in its social implications; if psychiatry has its will the child of the future will be much more likely to realize its assets and escape at least some of the consequences of its liabilities; there is productive treatment available; there is an adequate program of prevention. These and many other things piled stone upon stone in this building much more surely than did the hands and the tools of the workmen. Were it not for these stimuli there would be no need for this Institute. It would never have been built. In one sense it is a right and proper monument of scientific progress.

Whatever may be the innate value of a movement, it soon becomes ineffective unless there are great leaders to carry its banners. Ideas, however, brilliantly conceived need men to develop and mature them. Such a man is George H. Kirby. Having been associated with Hoch (who should have lived to see this day) and imbued with the ideas of Adolf Meyer, the dean of American psychiatry, Kirby is an outstanding scientific, educational and humanizing influence in psychiatry. There is not the need of reviewing his accomplishments. Wherever the language of our science is spoken; wherever men gather together to take note of exact and lasting clinical researches; wherever sound psychiatric education is discussed, there and then the name of the Director of this Institute will be heard and his opinions respectfully quoted. He is of the benefactors of psychiatry and humanity.

We have here the last word in beautiful and efficient building. I have indicated the stimuli which brought it into existence; touched

on the spirit by which I believe it is animated, and all too briefly given the calibre of its director.

What is going to happen within these walls? What will go forth from its wards and laboratories and teaching halls? What contribution will it make to science and to humanity?

No prediction is needed concerning the quality of the treatment which will be accorded to the patient who comes here for help. Every asset of scientific and humane psychiatry will be at his service. Do we all realize just what that means? I am associated with the oldest hospital for the treatment of mental diseases in the United States—The Pennsylvania. Founded in 1751 in the language of its incorporators for “the cure and treatment of lunatics”, it was regarded as one of the most advanced institutions of its day. From its ancient records I give you three quotations. The first is dated 1754:

“John Cresson, blacksmith, against ye hospital, 1 pair handcuffs, 2 legg locks, 2 large rings and 2 large staples, 5 links and 2 large rings and 2 swiffels for legg chains. To 3 locks, 13 keys, chains and staples for cells £1.10.3. Paid for 7 yds of Ticken for Mad Shirts, £0.16.4½.”

The second 1762:

“The great crowds that invaded the Hospital give trouble and create so much disturbance, that Samuel Rhodes and Jacob Lewis are directed to employ a workman to make a suitable hatch door and get an inscription thereon notifying that such persons who come out of curiosity to visit the house should pay a sum of money, a Groat at least, for admittance.”

This rule seems to have fallen into disuse since five years later:

“Orders were renewed that the Hatch door be kept carefully shut and that no Person be admitted into the house without paying the gratuity of Four Pence formerly agreed upon, and that care be taken to prevent the Throng of people who are led by Curiosity to frequent the House on the first day of the week, to the great disturbance of the Patients.”

The third is a comment on the treatment of the mental patient about 150 years ago:

“The medical treatment appears to have been directed principally to the acute or sthenic forms of lunacy, or cases of so-called phrensy. These were douched or played upon with warm and cold water; their scalps were shaved and blistered; they were bled to the point of syncope; purged until the alimentary canal failed to yield anything but mucous, and in the intervals they were chained by the waist or the ankle to the cell wall. Under this heroic regimen, some, probably the most sthenic, recovered their reason. There appears nothing in the records to indicate any special mode of treatment for melancholic, or for the stuporous forms of mental disorder. Later there were mentioned certain special appliances for rousing such patients, which judging from the description must have, temporarily at least, effected the desired object.”

As you walk through this Institute note what is available for the mental patient of today. Let your minds dwell in retrospect on the common and best practice of the last century. Then you will realize how far psychiatry has climbed and what this progress means to the man or woman who walks among the shadows of unreality.

What will be accomplished in the laboratories of this Institute—those inner temples of science where as is right and proper only that which can be proven is finally acceptable? Nevertheless, there is a romance to be viewed through the lenses of the microscope and in the test tube which is beyond the ken of the most imaginative writer of fiction. There have been found and there may be found again new worlds quite as important to future civilizations as any ever discovered by explorers who sailed across uncharted seas. Such scientific adventurers will be found among the workers of this Institute and it is not too much to hope that new scientific horizons may emerge into view.

But these things in one sense are known qualities. Their present value at any given time can be estimated. They can be observed. They can be measured. They can be weighed. I should like to speak of other things—the intangibles. They cannot be seen. They

cannot be measured. They cannot be weighed. They are the imponderables of psychiatry.

In this somewhat too literal age we are prone to accept too readily the fact that two plus two make four and perhaps, are committed to unreservedly to the doctrine that the whole cannot exceed the sum of its parts. Almost always there is something over, above and beyond, and that something is not to be explained by any or all of the unit parts. Consider the most highly developed living machine—the human organism. As far as science will permit, analyze separately its structural parts, measure and weigh them, estimate as nearly as you can the limitations and capacity of the mental functions, tabulate and classify everything, add it together and there will be left over a large and important something whose operation to a considerable degree is uncalculable. So it is with every vital and dynamic thing. No school of psychiatric thought, no psychological theory, however elaborate it may be, no laboratory, no single method of therapy is comprehensive enough, alone or in combination, to determine the limitations and directions of psychiatry. Correspondingly, it is not unlikely that many of the future triumphs of psychiatry will be larger and greater than its theories and its teachers. They may overflow its test tubes and be beyond the focus of its microscopes; they may be culturally, ethically and socially determinative. At this moment they are among its imponderables.

It has been said that mental disease is often a temporary or a permanent departure into unreality. Perhaps, it may be fairer to say, that the aid of unreality is enlisted when the odds of reality become too heavy. Those who are mentally sick fight their battles under strange banners and odd devices, variously labelled the delusion, the hallucination, the obsession, the illusion, the disturbance of mood, of thought, of conduct and the like. Strange and bizarre as these devices are, there is in them, nevertheless, a universality and an economy of expression which render them more penetrable to the skilled observer than the mechanisms which underlie so-called normal behavior. In mental deviation, often enough, there stand revealed in bold and stark outlines fundamental driving forces. It seems indisputable that these dynamic motivating influences belong to the same category as those which determine everyday so-called normal conduct reactions. The responses differ in degree but not



in kind. In normality basic reasons are too frequently inaccessible; in insanity motivations are less successfully concealed. Frequently, the symptomatic disguises are pitifully thin and inadequate for concealment. Mental disease is apt to remove or at least diminish inhibitions. Sometimes the writing on the clinical wall is blurred; sometimes it is startlingly clear. It is not too much to say, that if all of these writings could be deciphered in our patients we would know, really and completely know, why those others of us who are not patients, behave as we do. No one can foretell how far back into the dim history of our species, such knowledge might not enable us to penetrate. No one can say to what extent it might not widen the horizon of the future. At its minimum evaluation we may expect from this source some true understanding of human behavior.

Above and beyond this, it is not merely visionary eventually to hope for somewhat intelligent criteria and guidance in the direction of affairs, great and small, whose sum total shape our earthly destiny. Here is a promise of mental hygiene which may eclipse even the signal triumphs of physical hygiene. Here is an imponderable but it is safe to predict that it will weigh very heavy in the balances of life and happiness.

Psychiatry has been obliged to study environment. Lacking many instruments of clinical precision, perhaps fortunately, it has been forced to divide its attention between the patient and the surroundings in which his symptoms first appeared. If it is true that mental disease is sometimes an attempt to escape from reality then it has seemed worth while to scrutinize that particular reality which the individual sought to evade. Certain destructive environmental patterns began to be uncovered with entirely too much frequency to make it possible to discard them as coincidental. In some of these patterns there may be traced difficult barriers placed in the way of the fulfillment of natural instincts. The weaving of many of them began in childhood. Sometimes the design is quite clear; often it is indistinct. Some day those environmental patterns which are truly destructive will stand out in bold relief. Here again will be knowledge whose application will extend far beyond this or that patient, or this group of psychoses or indeed beyond all patients and all psychoses. It will have its application to the whole fabric of society. It will show where the fabric has worn thin; where reinforcement is

needed; where the pattern of the weaving had better be abandoned altogether. The beginnings of such knowledge constitute another imponderable. It is going to weigh heavily.

Within comparatively recent times some of the cherished and time-honored social usages of civilization have been subjected to rather heavy fire. For instance, the institution of marriage is on trial. Jurists are alarmed over the ease and frequency of divorce. Substitutes which leave to marriage nothing but its name are being proposed and seriously considered. The problem is being studied from many angles. Unfortunately these studies have been more or less amateur and intuitional and such guess work is largely valueless. In the words of Adolf Meyer there is a delusion here as elsewhere that, "in the complexities of human life intuitional revelation stands above objective study and inquiry." A careful consideration of the life history of certain groups of mental patients and perhaps particularly an intimate survey of certain types and phases of those pathological compromises with reality, the major and minor neuroses, is bound to yield material which will throw light on some of the tragedies of the marital relationship. True, such material will never be reducible to exact laboratory proportions. It is another psychiatric imponderable.

We live, perhaps particularly in our own striving land, in an age of standardized machine efficiency. Compare the remark attributed to an humble workman of the Middle Ages who when questioned about his occupation proudly replied, "I am building a cathedral," to the boast of the little son of the worker in the huge assembling department of an automobile plant, that his father had been "promoted from the rear left mudguard to the piston rings." If industrial production is to be maintained at its present level and even increased, standardization must be more and more perfected. Of necessity, this means that many workers must be engaged in monotonous labor and, perhaps, the pride of accomplishment may not rise beyond the fact that the new machine punches bigger and better holes in the strip of metal which is inserted or that the workman can feed packages to be wrapped as quickly as the machine can wrap them. At this time, no one can have any final thoughts concerning the necessity and value and effect of standardization upon the progress of civilization. But psychiatry must take note of conditions as

it finds them. It must study them objectively. Already, one of the youngest children of psychiatry, industrial mental hygiene, has commented on the relationship between the brooding reveries permitted and perhaps favored by wholly monotonous occupation and the statistical curve of industrial accidents. Here is something which may not be viewed under the microscope nor reduced in the test tube and yet it is conceivable that it may be a factor of some importance in human evolution and happiness. Even inexact formulations cannot be made without the understanding and cooperation of psychiatry. It is an imponderable which dare not be neglected.

When a thoughtful and experienced clinical psychiatrist studies a patient and his psychosis and painstakingly reviews the life history, he is very apt to come face to face with a little child. This child is the patient in miniature 19, 20, 30 or more years ago. It is the unusual case record in which the story of the childhood years does not contain chapters which the psychiatrist knows it should never have been necessary to write. These are tragic chapters. All too frequently they are the premises and the psychosis is the logical conclusion. Indeed, sometimes it is the inevitable conclusion. For every individual who has definitely given up the struggle and become submerged in the unreality of a frank psychosis, there are dozens whose hold on reality is all too uncertain and all too precarious. In the struggle for mental security they are forced to resort more or less frantically to expedients and doubtful devices because the conditions of their childhood weakened rather than strengthened them. If the slings and arrows of fortune are not too outrageous, they may survive but often the best they may hope for is unadjustment, failure and unhappiness. The importance of this imponderable of psychiatry needs no argument or proof. It will be one of the duties and privileges of this Institute to give the child his chance. Science has reduced his physical hazards. Let it now make his mental jeopardy as small as is scientifically and humanely possible.

These are but a few of the imponderables of psychiatry. There are many others. There is war. There is crime. There is poverty. There are legal discrepancies and even injustices. These things are apt to negative many of the proud boasts of civilization and make many of our cultural advances appear as somewhat paradoxical anti-climaxes.

Looking into the future it is safe to predict that this Institute will have two great investigative functions and purposes focussing on a single objective—human adjustment and happiness. The first function will deal in measurable and exact quantities. It will have a vast field in which to labor. It will seek the answer to some of the problems of psychiatry in the tissues and chemistry of the body and particularly in its supreme organ, the brain. Every resource and reserve of modern science will be brought into action; every tool of the trade will be utilized. It is reasonable to believe that at least some portion of the answer which may lie hidden in structure and chemistry may be revealed.

The second purpose, likewise, will be objective but it cannot insist on scrupulously weighed quantities. It must consider the imponderables. It could not ask for a larger opportunity. Its laboratory will be life itself. It must not hesitate to tread new paths and even by-paths if there is the promise of effective information. It must have the spirit of the pioneer.

\*“Our pathology does not get its most substantial facts from structure today, however much of our work does need the *control* of structure. Not even metabolism and the concepts current in parasitology and bacteriology, in neurology and toxicology, in physiology and endocrinology, are sufficient and profitable and applicable to a great extent. The concepts of neurology, structural and functional and experimental, rise only to a limited extent to the demands of what we meet in our experience. Yet all these must be utilized, and while we have to have the courage of our best possible formulations of the likely occurrences and emergencies with which we have to deal, these formulations must be kept in harmony with and checked up by what the more easily controlled sciences furnish us.”

In the exercise of its functions this Institute will attempt to lessen and even overthrow ignorance. The side of more exact scientific investigation will encounter less opposition. After all there is a groundwork of established formulae which is accepted by all reasonable men. In the study of the imponderables there will be met much error, bias, prejudice, intolerance, useless and even destructive propaganda. In certain directions at least, ignorance is quite capable of perpetrating outrages against humanity as base as any

\*From an address by Adolf Meyer.

to be found on the darkest pages of history. Stripped of its disguises, ignorance cannot survive against objective inquiry. You may recall the allegory of the oyster. It tells the tale of the great fight for supremacy between Probably Arboreal, the representative of our early ancestors, and the giant oyster. "As Probably struggles with the unknown thing that holds his foot as in a vice, he calls for help. But while his friends gather about on the shore to watch the combat, which is to end apparently in the drowning of Probably, none will help, for they are sure it is a god or a devil or an octopus that has Probably Aboreal in its clutches. Since spectacles are always interesting, they sat down comfortably on the beach to see how long it would be before Probably Arboreal disappeared. Gods and devils, sharks and octopi were forever grabbing one of their number and making off to deep water with him to devour him at their leisure. If the thing that dragged the man were seen, if it showed itself to be a shark or an octopus, a shark or an octopus it was; if it were unseen, it got the credit of being a god or a devil." "But now there is a stir among Probably Arboreal's friends on the shore, for Probably has reached down and grasped the thing which has him by the foot, and with a mighty effort has thrown himself backward toward the shore. As his feet come out of the water they see it is an oyster, a giant oyster, but an oyster that has him by the foot—neither a god, nor a devil, not even a shark or an octopus, but an oyster! In the allegory Probably wins, and the race of oysters sinks into the sea, never again again to challenge."

May this Institute do as much to gain the ultimate victory for psychiatry.



## THE MECHANISM OF HALLUCINATIONS\*

### SYNDROME OF EXTERIOR ACTION

BY DR. HENRI CLAUDE,

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If the word "hallucination" can be retained within the bounds of practical terminology, for application to psychopathic phenomena characterized by an unfounded belief in the reality of sensations, or of perceptions "which do not exist", (voice, cenesthetic hallucinations, echoes of thought, etc. . . .), we believe that as soon as one considers the mechanism of such phenomena, a distinction is made necessary. The *true hallucination* would be found to be characterized by an invasion into consciousness of elementary sensations, neuter and empty of affective content. On the contrary, the *pseudo-hallucinations* represent phenomena of belief in the false "realities" of perception; essentially, they are distinguished from the former by their affective nature which associates them profoundly with the personality of the subject, and by their complex liaison with an entire system of similar representations, which constitutes most generally a *syndrome of exterior action*.

Whereas the true hallucinations seem to carry in their nature something of simplicity, of the "unexpected", of the anideic, the mark of their mechanical origin, the pseudo-hallucinations, admit of a psychological explanation by the very complexity of the operations which they imply (judgments, interpretations, expressions sometimes symbolic of affective tendencies), and their integration with complexes and affective tendencies of the subject.

The true hallucination implies a phenomenon outside the subject because it is the result of an organic alteration or of a dynamic disorder of the sensory and sensitive apparatus. This disturbance has its basis either in the center of the central nervous system or in the connections of the latter with the periphery.

It is better not to enlarge too much the group of cases in which these changes can be regarded as causative and in which the hallucination is of an organic origin. Unquestionably this latter type

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of hallucination is observed in cerebral or meningeal lesions (cerebral tumors, general paralysis or meningitis). The most typical examples are those furnished by Hughlings, Jackson and Cushing.

In cases of intoxication (alcohol, cocaine, hashish, etc. . . .) it is very likely a question of irritation limited to certain regions of the cerebral cortex.

At other times, circulatory disorders modify the functional state of the centers, as for example in epilepsy, and in migraine. It is possible that these circulatory disorders are the result of distant reflex phenomena, or that certain lesions, like the protuberant alterations cited by L'Hermitte and by Van Bogart, act by a kind of diaschisis on certain remote centers. One must remember moreover that according to Hughlings, Jackson and Head, functional disorders occasioning hallucinations might be the consequence of the liberation of certain centers no longer inhibited by higher centers.

But I have mentioned these facts concerning hallucinations of an incontestable organic basis, occurring in subjects mostly sane only better to compare them with those which are observed in psychopathic conditions.

Far be it from me to fail to recognize that in confusional states of the toxic and infectious types, in the deliria of the same origin, in the precocious dementia of organic basis, one may observe also, as a transitory phase, hallucinations which have really the same organic cause as in cases of proven cerebral lesions, because the psycho-pathologic mechanism, although less evident, can be the same, such as excitation or liberation of centers, circulatory disorders, etc. . . . It appears to me more interesting to discuss the nature of the so-called hallucinatory manifestations in the transitory delirious states of the feeble (crises of delirium), and above all in the hallucinatory psychoses and the paranoid psychoses which one sees so frequently and in which the phenomena called hallucinatory are produced by mechanisms quite different from the one just discussed. It is the conception of the psychic origin of pseudo-hallucinatory manifestations which I believe ought to be opposed to the theory of organic origin.

In France, M. Clerambault has maintained, for several years, the doctrine of mental automatism in chronic hallucinatory psychoses, and has tried to demonstrate that in these maladies hallucinations are not "ideogenic".

Depending essentially on the development that he thinks he has found in these manifestations, notably the complete absence of thematic organization in the initial phenomena of mental automatism, de Clerambault has formulated the opinion that these phenomena have for a cause a correlative histologic process of the cerebral cortex, spreading in a sort of serpiginous fashion. According to this author, the ideogenic explanation is impossible; the sensory or motor disorders would surprise subjects unsuspecting or sleeping and would be provoked, just as psycho-motor disorders, by alterations of three regions of analogous structure. The chronic hallucinatory deliria would only be systematized and progressive sequela from preceding affections forgotten or mistaken; the systematization would be a neurologic process and not an ideic arrangement. The crises of exacerbation would even be from a clearly endocrine cause.

Although having in general defended the psycho-biologic conception of the origin of manifestations observed in the psychoses, I have had to combat on several occasions the opinions of de Clerambault, firstly because the histologic background, accounting for the bases of the disorders has never been demonstrated, and second for clinical reasons, that I shall develop later.

This conception of the organic origin of hallucinations in psychosis has also been maintained by Meynert, then by Nissl, and von Meyendorf, who have attached above all an importance to the disorders of cerebral circulation, be it at the cortical level, or be it at the level of the basal ganglia. Nissl has often expressed the idea that the sensorial error happening in full consciousness is the result of a deep sensory trouble and is not the product of an activity of thought. An hallucination for him is a product of the brain, just as a perception is. It is not the result of a deranged logic. The explanation of the pathological mechanism of the hallucinations can be only physiological.

Since Baillager has described psychic hallucinations, Seglas psycho-motor hallucinations, and Kandinsky has clearly separated under the term of pseudo-hallucinations the images of objects and of persons without apparent external reality, the psychogenic conception has for a long time been opposed to the conception above described. Seglas especially has insisted on the phenomena of hyperendophasia.

The verbal pseudo-hallucinations are characterized for him by two positive elements, "*hyperendophasia*" and the psychic objectivation; and one negative element, the absence of spatial exteriorization. Numerous authors have tried to bring to light the psychogenic character of hallucinations, but they have examined the subject mainly from the psycho-pathologic viewpoint. My opinions in this are essentially based on the observation of clinical facts.

My researches have led me to believe that in psychoses, the various manifestations called hallucinatory, and above all the auditory hallucinations, are the result of a disorder of cenesthesia, or profound modifications of personality, which the subject, being aware of their pathological character, looks for an explanation. The natural tendency of the mind in the weak, or the special orientation of associations prevalent among subjects of a paranoid make-up causes them to invoke an outside action. Therefore I have grouped all these cases under the title of *syndrome of exterior action*. The latter is developed under the influence of a double mechanism either having as a basis hyperendophasia and mental rumination, or through the persistence on awakening of dream-like memories more or less conscious. These are the two varieties of mechanisms which I shall successively examine.

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In subjects more or less weak from the psychic point of view, those with paranoid tendencies, one often finds a history full of affective shocks, repressed complexes and disillusionments which have caused these patients to derive pleasure from their prolonged mental reflexions, and from every exteriorization of an hyperactive thought (hyperendophasia of Seglas). Often their imagination causes them to form illusions by a mechanism of compensation, so frequently the case; they have tendencies to false recognitions, to creating in themselves mental representations showing the current of their thoughts and even to divulging their thoughts loudly in soliloquies. The hallucinatory psychosis, on a foundation thus prepared, will appear due to two new elements besides the hereditary predisposition; whether it is an affective shock, an emotion, a chagrin, or a disorder of the general health having particularly an action on the nervous centers. One of our most typical observations referred to a woman who had a very irregular and adventurous life.

She had been pursued for some years by an idea of rehabilitation. This idea was still more exalted at the moment of the realization of her marriage, which was supposed to bring her the desired satisfaction. She then had an attack of cerebral hypertension due to a relapse of malaria. She shows then her preoccupation under the form of hallucinations in relation with the current of her habitual ideas. She hears the voice of her brother with whom she hoped to be reconciled; he insults her, repulses her, or calls her good. She searches for him; sometimes the voices repulse her, other times they encourage her; they treat her with spit, then at other moments they say to her "You work well, you keep your house well." These voices, at first distant and indistinct, become more and more clear and recall only facts concerning her past or present life. On account of cerebral reactions attended by vomiting and headaches, I was led to make a lumbar puncture on this woman and I noted an increase in the pressure of the spinal fluid. The hallucinations, as well as the delirious ideas, disappeared after this intervention. They reappeared some months later only to be entirely cleared away after another puncture.

It is likely that the affective charge, which was attached to the idea of reconciliation with the brother, had taken on more and more importance as the hypertension modified the state of psychic activity. The biologic conditions favored the exteriorization of a psychic process in relation to a repression of long standing.

The cases of this category are extremely numerous but they are not generally brought about by a functional cerebral disorder. More often it is a question of subjects physically or morally fatigued, intoxicated or afflicted with some type of organic affection or of traumatic shock, etc. . . . The phase of mental reflexion ends, after a longer or shorter period, or following various incidents, in an hallucinatory delirious phase. Then begin illusions, then hallucinations of general sensibility in relation to cenesthetic disorders, sensory phenomena scarcely formulated at first, then more and more clear, above all verbal pseudo-hallucinations or genital impressions.

An important fact is that these phenomena are always an integral part of the personality of the subject. We are not dealing now, as in the true hallucinations, with sounds without significance, with voices, with words of any kind or with stereotyped words, or with



figures without special character. These patients describe very clearly that the voices addressed to them insult them or flatter them, make remarks about their actions, or their conduct; they carry on conversation with the voices. Then, when the affection is in a more advanced state, the psycho-motor phenomena begin. People force them to do certain things, or prevent them from doing them, they are made to speak, their brains are activated, their thoughts are started or stopped. In the minds of these patients, there is always the idea, implanted from the start, that it is a question of a force independent of their will, that it is a question of exterior action, poorly defined at first; they use the words "*they*", "*one*" to designate those who cause them to act. Moreover very often the patients, at the beginning, do not complain. They do not recognize clearly at first what is happening to them. It is *later* that they search for reasons for these phenomena, that they appeal to one of the mechanical explanations (electricity, wirel ss, waves) or psychic explanations (suggestion, transmission of thought), or blame persecutors.

The clinical history of these patients causes us to think that the origin of these hallucinatory psychoses, acute or chronic, ought to be looked for, as I have indicated in my first publications (1924) in a persistent disorder of the affectivity, or of cenesthesia, ending, in predisposed individuals, in habits of mental reflexion, with a tendency to exteriorization either of language or of sensations. By an imaginary addition or by interpretative habits, the subject is little by little led to attribute phenomena strongly adherent to his personality, to an external cause, whence the appearance of sensory phenomena. Gradually he is led to explain this exteriorization of sensations or of actions by mechanical interventions which appear more satisfactory to his mind, even though he knows them less well. Thus is created a variety of syndromes of exterior action with a cenesthetic or affective basis, and nourished by imaginative or interpretative mechanisms, which take the false appearance of sensorial-hallucinatory phenomena.

Masselon, Ballet, and Blondel have already expressed doubts as to the sensory character of hallucinations in the psychoses. Chaslin writes: "When one seeks to ascertain exact information among hallucinated patients, only parts of phrases are obtained, the imagination does the rest." Querey corroborates this by saying: "When

one separates from an hallucination of hearing the motor element, the surcharges, the interpretations, the delirium, etc. . . ., the perception without object is often reduced to an insignificant quantitative residuum." And Mignard affirms that there is only a weak sensorial residuum in hallucinations. On the other hand Bunke has written a propos of the discussion on the subject which occupies us: "These hallucinations present themselves in fact not unadapted and not without relation to the thought itself."

Finally in his book "Der Sensitive Beziehungswahn", published in 1918, of which we have been able to consult only the 1927 edition Kretschmer expresses ideas very analogous to those that we defend. What is noteworthy in the clinical picture presented by him, although it concerns from his point of view psychoses essentially interpretative, is the frequency of these para-hallucinatory phenomena at the acme of the psychoses. As he states: "The judgment expressed by the patient as to the reality of delirious images is very variable. The sentiment of this reality can go as far as the sensorial illusion." However, the individual is sensitive, with tendencies to pride to which is joined a live sentiment of duty and morality of which the apparent weakness hides the remarkable power to retain and to elaborate the emotions felt—such a patient will transform repressed pathogenic emotion into derived mental images, and will turn it towards delirious associated complexes of symbolic character, of defense or compensation, which occupy the foreground of their consciousness. Thus are born morbid interpretations, badly systematized, of which Kretschmer has described diverse varieties. If this author has given the principal rôle to the interpretative element in these deliria, we believe that the imaginative element ought not to have a pathogenic rôle less important in the variety of syndromes of exterior action that we are describing, and to which we accord equally significant affective basis.

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But the syndrome of exterior action can be developed in other conditions. It is a question of twilight states of the consciousness which arouse and organize a dream-like activity, imaginative and affective, which take the appearance of an hallucinatory reality imposed on the consciousness. These twilight states are of two orders: *Confusional states* often slight which lead to a weakening

of the *critical faculty*, and the second, nightmares, that is to say, dream-states associated with a restless sleep.

The explanation that we propose for these conditions is two-fold, that is, *organic* and *psychological*. *Organic* in the sense that physiological factors intervene, both in the confusional state (often mixed with elements of anxiety), and during sleep, accompanied by a true neuro-vegetative disturbance which is caused by anxiety (the more active since sleep produces a quieting of the superior mental factors). *Psychological* in the sense that the nucleus of these psychopathic states is found deeply embedded in the psychological personality of the individual, and depends upon it directly.

The rôle of the biological factors appears here considerable, but limited. Indeed these states of confusion or of anxious sleep constitute the optimum condition for the development of such a syndrome, but what they actually attain is intellectual activity in its entirety under the form of numbness, or intellectual clouding. They do not act under the form of an automatic freeing of images which appear as coming to consciousness from the "outside". This, we shall consider in detail later.

We shall specify the various points which we are going to study.

In carrying our investigation to the beginning of the difficulty, the interrogation of many patients having "delirious hallucinations", and the information furnished by their associates have attracted our attention to the importance of nightmares, and to hidden dreams and to their sequelae in the formation of such pathological states. For a long time, the after-effects of dreams have been cited as a cause of hallucinatory delirium, and our impression is that they are a frequent cause, which does not seem evident because the patient, entirely occupied with his delirious conviction, and its reactions, fails to disclose the whole pathological history. He does not worry about it at all since it is not the illness but the "real" symptoms which concern him; quite to the contrary it is to discover the significance of these "real" facts that he occupies himself.

We have found it interesting to investigate, concerning these cases *which appear at first sight so distant from the syndrome of exterior action, and "pseudo-hallucinations"*, whether a genuine hallucinatory activity is here to be considered. Thus the proposed aim is double:

1. To establish that there are delirious hallucinatory states which are *provoked* by nightmares and confusional states.

2. To show that, even in *the cases* of organic etiology the "*hallucinatory*" phenomena still appear as a "*pseudo-hallucinatory*" syndrome engrafted on the affective tendencies.

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We cannot here go into the detail of our observations, as this would take us too far afield. Let it suffice to say that what distinguishes these states is that, in the dream-like paroxysms, consciousness is invaded by delirious and "*hallucinatory*" experiences which occupy it entirely to the point of constituting the only reality and that the benumbed critical intellectual activity gives way to affective tendencies, while in the subsequent phases of lucidity the patient has recovered activity and thought, but projects into his perceptions the delirious beliefs which deform them.

An equally common trait in recorded observations is that after nightmares and episodes of confusion, the psychopathic state organizes itself *in the form of the syndrome of exterior action* appearing from the mildest form of simple persecutory beliefs to the condition of complete possession by an animal as seen in grave cases.

Let us now consider the conditions of the appearance of these episodes, which, under the form of nightmares or of confused states, leave so profound an imprint on the personality. Indeed it seems that if the repercussion of these states is so great in the development of delirious convictions and of hallucinatory appearance, it is because they themselves plunge their roots deep into the actual affective tendencies of the subject. And this is just what our observations show us. How can we miss seeing the relationship between this possession of our patient by such an animal as the dog and the remorse which torments his life. Another expresses in his delirium and hallucinatory interpretations the shame of his "*private life.*" Others similarly show "*hallucinations*" which coincide with their most active affective tendencies. Take for example an old spinster with a suppressed sex complex; it is when she goes to bed alone in a double bed in the room next that of her married sister of whom she is jealous, that there appears in her the predominantly nocturnal dream-like state in which she sees a saviour trying to snatch her away from the persecutions of her sister.

In one of our last cases, we saw a very impassioned state of jealousy and extreme anxiety develop into a transient syndrome, which disappeared at the same time that the patient was pacified, without leaving marked traces. Nothing shows better how the development of the delirious and hallucinatory system, after a paroxysmal attack, is intimately associated with the depth of tendencies and affective complexes which come into play.

However, if affective exaltation, mental rumination, and delirious introspection can thus produce a state definitely psychopathic, as in certain patients even before the appearance of dream-like episodes, another etiologic factor imposes itself which seems necessary to give a more vigorous impulse to the evolution; this is weakened intellectual activity which is produced by sleep and confusional states.

Certain biologic states thus appear as requirements for the development of the phenomena we are studying. It must be impressed that the explanation which we advance for these hallucinatory deliria *does not ignore the importance of such factors*; it simply accords them no more than they merit. Every day we sleep, and every day we see with extreme frequency the symptoms of mental obnubilation of confused toxi-infectious origin resolving into no such phenomena. Moreover, this psychic numbing is universal, and affects our mental activity in its entirety by a lowering of the critical faculty and of the threshold of belief.

This lack of rational control is evidenced by weakness of judgment of reality. This reality becomes the simple application of affective tendencies, with the substitution of an affective reality for the objective reality, as we shall see further on.

In all our cases, either the hallucination appears as an exogenous interpretation (voices of neighbors, movements of the bed), or as an endogenous interpretation (odor of gangrene, automatism of banal ideas, mental images not recognized as personal). What makes the basis of these interpretations is *the affective preoccupation*, the complex, the false belief.

We should, from now onwards, note that *the syndrome of exterior action* reaches its highest point when the interpretation penetrates the personal *automatisms*, that is, when the motor or ideistic functions which "arise spontaneously" and to which we



give no attention are judged as the result of an external influence; the delirious introspection creates from that point a source of constant interpretations in which the patient pours his affective tendencies.

*It is not always easy to untangle the interpretative mechanism because patients having come to the conclusion of their interpretation give it as an innate idea: I feel electricity, I am forced to think, etc. . . . on the other hand, questioning the patient would appear as distinctly dangerous, for he will often advance an explanation which will have come only as a result of the interpretative mechanism.* For example, we suggest to a patient that which she seeks when we ask if she does not feel electric sensations in her body . . . There, we believe, is the source of the illusion which we have just tried to destroy. The object of our work is precisely to show that these pseudo-hallucinatory facts which the patient's statements and answers to our questions advance, can appear as having been gotten at the start in their actual form, when they are really the ends of a long skein which we are obliged to unwind.

The confusional states, as we have already indicated, are characterized by the fact that the patients find themselves plunged into hallucinatory reality. They find themselves disoriented, and entirely absorbed by their mental images. If at times they touch on reality, it is in order to impose on it a gross deformity (false recognition).

What distinguishes these states from the phase which we have studied and which follows them, is that there occurs a narrowing of the field of consciousness, a sort of increased closure of the mental diaphragm, which is consequent to the obnubilation and weakening of the intellectual activity. This happens so completely that their thoughts find themselves reduced to a play of images, of representations, where their affective tendencies blossom forth. It is this that strikes us in observing L., one of our patients, who presents a marked exaggeration of that which we find in the confused states in most others. We find this patient in fact completely occupied with her voices, with reproaches which have been made her, with the dogs which she has in her stomach. She hears the voice of her dead husband. She is under hypnotic influence. The voices speak to her only of obscenities, etc. Now two things seem remarkable to us

in this state: the first, that all these representations are in a measure organized according to one or two fundamental *affective dispositions*, viz., fear of death, and of sexual debauch; and there is also a preponderant source of supply of such material in *memories* which reform into imaginary realities. The conditions for belief in the reality of such an imaginative activity are found in the intellectual *weakening which excludes critical reasoning, and an impulse of the strongly activated affective tendencies which are evidenced by such representations*. Tormented by her remorse and fears, the patient orients her memories and the images they give in the direction of this affective current and she is entirely absorbed, because her mental capacities do not permit her to free herself, as in wakeful normal thought, from the grasp of incessant rumination.

Thus we do not believe that this activity is the result of a special stimulation of the sensorial centers, which would liberate whole stock of images, but we think that it is derived from affective tendencies of the subject, and that the essential condition of thought of reality that it carries comes from the lack of the critical faculty due to the confused state.

Indeed, the purely mechanistic explanation of such an activity appears untenable. How, in fact, can one understand that the automatic release of these hallucinations can free only the images which are found conformed to the preoccupations of the patient, and how besides can one understand that all the images elicited are found grouped in a collection having a dominant complex at its center. How can one understand, for example, that the hallucination, such as the sight of a dog, can be associated with the hallucination of the odor of a dog. However, that appears to us to be a characteristic of these conditions which present "hallucinatory associations", where are found bound together, not only hallucinations of the various senses, but some entire series of images have the same affective value. The words pronounced, the voices heard and the visions seen are found collected and are carried along in one affective reaction. There in the eyes of the patient is a true "hallucinatory reality," analogous to that which takes place in a dream.

It is classical to assimilate dream-like confusional states with dreams, and that is what we have done once more. We still have to consider the true dream-like phenomena which happen during

sleep. We have already seen above that they differ from the confusional state in that the eclipse of rational control seems to be even more marked, and that when we sleep we give ourselves up to our memories and our affective tendencies, while remaining outside of all perceptive reality.

It seems to us that a fundamental distinction must be made between the simple elementary unorganized formation of pictures, such as appear in the shape of isolated dream-like pictures (such as hypnagogic hallucination) and the actual dream which presents itself as a panoramic chain of representations joined by an affective tendency. Dream-like pictures are empty, outside of affective complexes; the dream on the contrary is filled with significance.

The confusional state must, to our mind, be assimilated with the dream and not with the simple and automatic disclosure of incoherent and absurd pictures.

Nightmares are a specially organized form of dream. They imply a theme, and this theme received its significance from affective complexes which it expresses in symbolism. We find thus, at all degrees, in all phases of the evolution of hallucinatory delirium of our patients, in the form of exogenous or endogenous interpretations and of dream-like panorama, the primordial influence of affective complexes of the personality facilitated by eclipses, by the giving way of rational control. On the contrary, nowhere do we find a simple neutral elementary release of a "true hallucination" thrusting itself mechanically on the conscience and, so to speak, "from the outside". On the contrary, "the hallucination" appears to us there as an especially complex phenomenon in which operations of interpretation find themselves implicated, and it is in this respect that we decline to consider them as true hallucinations.

Such is our first conclusion.

It remains to us now to consider the relations of the syndrome of exterior action (such as it is found in our patients) with the dream-like states we find at the onset of its evolution.

We have seen that all phenomena observed in the various phases of our observations constituted either "dream-like imaginations" (confusional states or nocturnal dreaming), or delirious interpretations which could only be considered as true hallucinations.

The syndrome of exterior action (of which the idea of internal

possession constitutes the highest degree) represents the ensemble of these morbid exogenous and especially endogenous interpretations (exterior voices, capture (theft) of thought, orders, pseudocenesthetic hallucinations, etc.). The dream-like activity characterizes the paroxysmal states (confusion, nightmares).

Let us see what the relations are which unite this dream-like activity (imaginative and affective), and the true mental rumination mentioned in the first part of this paper. The rumination syndrome is characterized by the incessant resumption of a dominating idea which invades the thought, which is intent on making it more precise and explaining it under all its aspects and its possible consequences.

The dream-like fact, on the contrary, seems to spring up straight away in the consciousness which experiences it. But we have just seen that it only reveals the fundamental preoccupations which were until then latent, by giving them substance, in such a way that, between these two states apparently so far apart, one discovers at their base the link of acting tendencies.

As this dream-like activity is conditioned by the confusional state or sleep, one might contend (as generally happens) that the syndrome of exterior action is found to depend directly and immediately on the organic factors of neuro-vegetative or toxi-infectious order of sleep or confusional state. But we have already shown that these factors only play a rôle through the intellectual stupor which they provoke and by conditioning this dream-like figuration. Thus the action of these organic factors is not direct and immediate, and this brings us nearer to Bleuler's distinction so important in the *psychiatric explanation* of the primary and secondary signs. Furthermore, as the syndrome of exterior action unfolds and persists even when the confusional process (or sleep) has ceased, *it seems that there is a certain independence in both these states.*

How are we then to picture these things?

The elements of the syndrome of exterior action are furnished by the affective tendencies of the patient, this is evident, as we have amply noticed it in our observations.

As regards the origin itself of the delirious belief in an exterior action, we believe it finds its explanation (at least for the kind of

cases we deal with) precisely in dream-like episodes. The belief in exterior action takes root in these episodes, either because they produce such debauchery of the imagination that the patient is reduced to believe that it is inspired from the outer world, or because the dream expresses under this form of influence a suppressed complex (numerous similar cases published by psychoanalysts), or that the delirious introspection or mental rumination favored by these twilight states of conscienceness makes appear as strange the sensations and automatisms (strangeness of the inner world).

However as in its development it is supported and filled by the actual and deep affective tendencies of the patient, the syndrome of exterior action, if it appears at this occasion, evolves, once the dream-like state is over, only on condition that it answers to some "secret anguish", or to "some secret desire".

The study of our various cases which we have not been able to report in full has led us to consider different mechanisms in these varieties of delirium: sometimes there is an organization of a syndrome of exterior action where the deep affective tendencies of the patient find themselves expressed, starting from disappeared dream-like states; sometimes one notices at the onset a confusional state in full evolution but slowly regressing later on, while a delirium of pseudo-hallucinatory exterior action persists and becomes organized. Finally elsewhere, one comes again across the notion of a great affective shock producing a nocturnal dream-like state which has moulded itself on it, but which has disappeared without leaving any traces, once the appeasement has taken place.

We see that these psychopathic states, thus defined in their genesis and evolution, may be separated from both the stuporous confusional states and the other forms of syndrome of exterior action (form based on mental rumination and hyperendophasia) and may perhaps deserve the name of *dream-like syndrome of exterior action*.

To conclude: These considerations based on clinical facts, harmonize remarkably with the propositions of the eminent psychologist, William James, when he wrote: "The irruptions of the sub-conscious mind into the clear conscious mind have the character of objectivizing and giving to the subject the impression that he is dominated by a strange force."



## THE BREEDING OF THE MENTAL ENDOWMENTS OF GENIUS\*

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Today we have the honor of participating in a most eventful occasion, the dedication of the new home of the New York State Psychiatric Institute and Hospital. The intellectual influence of such a well-managed and ably conducted psychiatric and medico-psychological research institution is almost unlimited. It is well worth remembering, at the same time, that the importance of the problems of mental race-hygiene was realized very early in the United States and was investigated here very thoroughly. The American investigators aimed not only at the elimination of psychically inferior material from the process of heredity, but also at the breeding and development of great talent.

In our own researches in Germany we have been concerned quite frequently during the last few years, with the biology of genius. Our studies of the evolution continuing, for centuries, in European and particularly German families have yielded information regarding both the process of heredity and the social selection of highly-gifted individuals.

This information may be of interest to you in your own endeavors.

In the creation of genius we see high mental endowment encounter a certain psychopathological component; this latter component is subject to the same rules which under other conditions, determine the hereditary occurrence of psychopathy and of endogenous psychosis. We realize, however, that the question of the talents of genius is only a part of the general research problem of high mental endowments. That heredity and not environmental factors constitutes the fundamental cause for the achievements of great talent may be considered as definitely established at the present stage of our knowledge. Peters collected the school records of over 1,000 children and compared them with those of their parents and grandparents. On the average the marks of the children deviated from the mean in the same direction as did those of their parents; so that the children of more gifted parents were also more gifted.

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while children of less gifted parents were, on the average, less gifted. The average deviation of the marks of the children from those of their parents was about one-third, and agreed similarly with the marks of the grandparents.

The statistics of well-known and famous men showed similar results. Woods has investigated the relationship of 3,500 outstanding Americans. While the probability was only 1:500 for the average American to be related to one of the famous men, the statistical probability was 1:5 for a relationship of these famous men with each other. In other words the famous Americans are 100 times more related to each other than to the rest of the Americans. Galton has investigated the relationship of 1,000 of the most famous Englishmen. On the average he finds that 100 of the renowned men had 31 important fathers, 41 important sons 17 famous grandfathers and 14 outstanding grandsons.

In an analysis of the breeding of the German intellectuals, we find similar conditions prevailing. H. W. Rath has recently shown the rather close blood relationship between a great number of the Swabian poets and authors. Investigating the genealogy of the Burkhardt-Bardili family, this author showed the common descent of Schelling, Hoelderlin, Uhland and Moericke and could further show that there were also relationships to Hauff, Kerner, Hegel and Mozart. The descent of Goethe from Lukas Cranach has been established by the careful genealogical studies of Sommer. It is quite probable that with the help of similar detailed researches on heredity, other series of blood relationships of famous men could be established; especially if one were to investigate racial tribes with an abundant production of genius similar to Swabia, e. g. Saxony-Thuringia.

Some of the royal and noble families who have long been interested in their genealogy, present striking examples. In this connection may be mentioned the house of Orange with its large number of highly gifted members, and their blood and talent relationship to famous French marshals, to famous Hohenzollerns, etc. At any rate, it is quite safe to state that in Germany too, the familial relationship of men, famous in art and letters, is considerably higher than could be expected from ordinary statistical probability.

A more detailed analysis, however, shows that there exists not

only a hereditary relationship between gifted individuals in general, but that class (estate) and family breeding may produce sharply defined talent-clans which are endowed with certain special abilities. On the other hand, genius may originate from the common people without any such preliminary breeding, quite accidentally and unexpectedly. An analysis of the family histories of Kant, Fichte, Hebbel, Haydn, etc., shows that there were neither exceptional gifts nor professional predispositions in their families. According to the law of probability, it is to be expected that such happy accidental combinations of hidden and unsuspected talent will occur among the millions of human beings but they could not suffice to supply a whole nation with leaders. On the contrary, we find that in the breeding of talent and genius by any nation, certain families and professional groups among which a blood relationship exists, play a greater rôle than the rest of the people.

First, might be mentioned those families of artisans whose significant part in the production of great musicians and great painters is easily demonstrable. The genius may be a descendant of artisans or of men interested in art with high mental endowments along similar lines. Among famous musicians there are: d'Albert, Beethoven, Boccherini, Brahms, Bruckner, Cherubini, Hummel, Löwe, Mozart, Offenbach, Rameau, Reger, Schubert, Stamitz, Richard Strauss, Vivaldi; of famous painters we may mention: Böcklin, Cranach, Dürer, Holbein, Menzel, Piloty, Raffael, L. Richter, Hans Thoma and others.

As the highest development we see the production of whole families of famous geniuses, e. g., those families of musicians—the Bachs, the Couperins, the Bendas and the (Johann) Strausses. As carriers of musical heritage in the ascendancy of genius, considerable part is played by organists, country school teachers, simple professional musicians such as orchestra members and conductors, etc., and further by gifts dilettants. In the near blood relationship to great painters we find obscure painters (Boecklin), but also real artisans such as lithographers (Menzel, Piloty), etchers (L. Richter), goldsmiths (Dürer) or clock painters from the Black Forest (H. Thoma).

A second group, particularly important for the breeding of German genius are *those old families of scholars and ministers*. Their

mental endowments are sharply defined in one direction only. Occasionally they have produced important musicians (Schumann), painters (Feuerbach), and also some political leaders, (Bismarck comes, on his maternal side, from a family of scholars, which fact is of considerable importance with regard to the versatility of his mental abilities). In modern France, contrary to Germany, these families supply a considerable number of the political leaders. In Germany, however, these families supply almost exclusively the chief hereditary basis for poets and thinkers. In Germany these two groups of poets and thinkers occur as a closed and uniform heredity entity. The same families supply both types of mental endowment; and not infrequently the individual genius shows a generous mixture of both these *Anlagen*: the philosophers are poets (Schelling, Nietzsche) and the poets, thinkers and scholars (Lessing, Herder, Schiller, Hoelderlin, Uhland).

In regard to political and military gifts it is well known that in former times, the higher and lower nobility represented the majority of politicians and military leaders. Here again the above mentioned principles of selection and of breeding are in function. The evaluation of the biological conditions is somewhat more difficult in this case, because the nobility was a privileged class. Some may say that the large number of noblemen among the famous politicians and generals was a consequence of a privileged admittance to these professions and not due to an actual selection of mental abilities. It should be pointed out, however, that, primarily and obviously, it was a selection of mental abilities which led to the conferring of privileges, and that such privileges could be maintained only for a short time, if the corresponding achievements were consistently lacking. One has occasion to observe everywhere in modern times that privileges disappear by and by, as the accomplishments of the various groups of the population become more equal.

Wherever there is an accumulation of high talent, we see continuously in effect those processes of guild, professional and regional selection and breeding which markedly concentrate and enrich the mental endowments that are usually dispersed and diluted throughout the nation. This holds not only for genius, but also for "collective talent", for the average business ability of patrician fam-

ilies of old commercial centers, and for those invaluable and self-perpetuating old clans of workers in local industries who are endowed with important psychomotor abilities such as are required in watchmaking and other fine mechanical industries of Switzerland and the Black Forest.

Although the piling up of talent through breeding must necessarily result in the production of specific one-sided abilities, still certain other mental endowments may occasionally be attained as by-products, but these by-products are usually less numerous than the special abilities of the particular class. Thus after centuries, when it has become intellectually more refined (and possibly somewhat deteriorated biologically), nobility produces not infrequently some poetic and artistic talent (Michelangelo, Titian, Kleist, Chamisso, Hardenberg, Eichendorff). The ability of clan-bred special talent is rather limited by its very nature. Any sharply defined special talent tends to produce experts with a decided lack of understanding of things outside their own field. Clan mentality, in a certain sense, has always been dull and stupid, cherishing rigid forms and traditions; class prejudice is their necessary evil. How can genius spring from such breeding; genius with its wide intellectual horizon, its tendencies to break down traditions and to battle the unyielding outside world? An important factor in this respect is frequently bastardization and the crossing of various dissimilar tendencies of talent, which is commonly observed in plant and animal biology and designated as the "luxuriation" of the bastard. The bastard race becomes larger and stronger than the parents. Wherever we investigate biologically the problem of genius, we find evidence of such crossings. Uncrossed tribes and races which have been inbred for long periods are strikingly poor in genius, although exhibiting otherwise quite excellent properties; examples are the relatively pure Nordics in certain districts of Northwestern Germany, and the old Spartans with their pronounced tribal exclusiveness. If, however, these same races, as a result of conquest or commercial immigration into ports, have the opportunity to mix with other highly talented races, we sometimes see, after several centuries, the almost explosive production of a large number of geniuses, e. g., in old Hellas or in the Florentine Renaissance: First, migration (invasion of foreign warring tribes), then a period, cen-



turies long, of relative mental rest, and then abundant production of genius. Sommer has claimed that the abundance of genius in Florence is timed mainly by an increasing admixture of immigrants of the German sword-nobility, with those native families which were highly talented in art. This hypothesis is probably true. At any rate, the theory of race-purity, the idea that any one highly talented race, e. g., the *ordic*, could be exclusively the carrier of genius, is completely at variance with a mass of historical and geographical-statistical facts.

It should be pointed out that the term *crossing*, as used here, refers not only to the mixing of races, but also to any mixture of two different groups of human beings, which have each been inbred for a considerable time, and which have thus acquired certain definite, circumscribed characteristics; this term, therefore, refers likewise to nations, tribes, territorial groups, estates (classes) and families with pronounced biological characteristics. It is very striking that frontier tribes situated between nations that differ in character show an abundant production of genius, e. g., the Netherlands, Saxony and Austria. On the other hand, genius production, among some German tribes at least, seems to be inversely proportional to the permanence of their settlement and their tribal purity; Northwestern Germany and Hesse seems to be strikingly poor in genius. Therefore the main outline of Reibmayr's theory is basically correct in spite of the fact that in his time the modern theory of European races had not yet been developed.

Genealogical statistics on individual geniuses show that they are not the product of pure breeding of class-regional talent only, but rather due to cross-breeding of such endowments. The instances that the genius is a cross of different peoples, tribes or classes, that he is a descendant of immigrant families or immigrant parents are numerous: (Frederic the Great—grandson of a Welfic messalliance with a French demoiselle, Eleonore d'Olbreuse); Goethe's family tree showing the admixture of Thuringian, Hessian, Swabian—Frankian (Textor) families; Beethoven and Schopenhauer, the products of Dutch immigrant families; Moerike (Brandenburgian immigrant family); Chopin and many others.

The investigation of the family history of highly talented individuals demonstrates very clearly the effect of biological "Bastard-

ization" and shows why it may lead to the production of genius. In extreme cases bastardization has almost reached the state of "Keimfeindschaft" (germ antagonism), the importance of which in human biology and pathology has been emphasized quite correctly by Hoffman. It results in a complicated psychological structure, in which the components of two strongly opposing germs remain in polar tension throughout life. This polar tension acts as an affective and dynamic factor and produces in the genius the labile equilibrium, the affective super-pressure, that continuous restless impulsiveness, which carries him far beyond placid, traditional, professional practice and the simple satisfaction of life. On the other hand in regard to his intellectual abilities, the polar tension creates in the genius his wide mental horizon, the diverse and complicated wealth of his talent, the all-embracing personality.

This is most clearly shown when a genius results from the crossing of two very different parental temperaments, from a "contrast-marriage" as has been pointed out elsewhere. Goethe's father with his dry, pedantic seriousness and Frau Rat with her sunny bubbling humor are polar contrasts. With some knowledge of the finer temperamental relationships between different character properties it is not difficult to trace both parental lines through Goethe's whole life: The paternal, schizothyme component represented by his distinguished and dignified classicism, by the serious and thorough industry of the scholar and collector, and by the somewhat stiff "Geheimrätlichkeit"; the maternal hypomanic component, by the bubbling, carefree temperament, the warmth of feeling and the great capacity for love. In his life and in his work both components are partly mixed but they may also be found spontaneously side by side as separate phases, works and behaviors. Similarly in Bismarck the coarse realism and the "junker-instincts" of his father contrast sharply with the sublime spiritual refinement of the bourgeois scholar-family of his mother and with her restless nervousness, her irritability and her cutting coolness.

Bastardization produces internal contrasts and conflicts, affect-tensions, highly strung and uncompensated passions and a spiritual lability, it consequently creates a predisposition to genius—but also to psycho-pathological complications. Thus the research on bastardization becomes closely interwoven with old familiar questions, leading us back to the problem: "Genius and insanity."

## PSYCHO-ANALYSIS AND PSYCHIATRY\*

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Without wishing to make an invidious list of the many institutions in America devoted to psychiatry I think it may be said that this is the third great psychiatric institute to be inaugurated in this country, the third of the institutes which by the magnificence of their foundation and the searching spirit that informs them are destined to arrest attention even beyond the world of psychiatry. It was my privilege, nearly seventeen years ago, to participate in the opening exercises of the first of them, the since renowned Phipps Clinic. The honor I now feel at being invited to play a part on the present occasion moves me to unburden myself of some general reflections, but they are such as have a direct bearing on the proper theme of this address. On revisiting this country for the first time since that event at Baltimore I cannot refrain from reviewing in my mind the changes that have taken place in that time in the world of American psychiatry, a world to which I once myself belonged.

It is my duty here to comment on the important technical advances in knowledge that have taken place in these years, but it might be of interest if I related my impression of three important events that have occurred in the general position of psychiatry in America. The most outstanding of these, and one on which this country has every right to congratulate itself, is what might be called the social consolidation of the profession of psychiatry. So much impressed is the outside observer by this, that it does not seem unmerited to say that America has actually created a new profession. In a very important respect one can almost say that the profession of psychiatry does not exist in any other country in the world. You, and still more my European colleagues, may be astonished at such a statement, but I make it because the respect in which it is true is in my judgment of far-reaching significance. It is this. If we consider for a moment the three great fields of the psychoses, of the psychoneuroses, and of so-called normal psychology, with its vast social implications, then one is bound to admit that the pres-

\*Address delivered at the opening exercises of the Psychiatric Institute and Hospital, New York, December 4, 1929.

ence of a relationship between them is perceived much more widely in America than in Europe. You observe I say "more widely", not "more deeply", for the scientific study of this relationship has certainly been carried much further in Europe, even though by only a small group of workers. Still the fact remains that in America both the medical profession and society at large have accorded a much more general recognition than elsewhere to the community of interests subsisting between these branches of study. In Europe, broadly speaking, the psychoses are the care of psychiatrists, the psychoneuroses are vigorously claimed by both neurologists and asylum psychiatrists, the battle being complicated by the appearance of a small but increasing number of specialists in that department; and academic psychology—with minor exceptions, such as limited contributions to industrial psychology—remains as aloof from the concerns of mankind as it does in America.

The importance I attach to the observation just made is this. I am convinced that progress in any one of the three fields in question can only be very partial and limited until the relationship between them is fully explored. It is easy to pay lip service to the existence of this relationship, but it is quite another matter to take it seriously and investigate its deeper meaning. Yet only in this way can we come to understand that the normal, the neurotic and the psychotic have reacted differently to the same fundamental difficulties of human development, and to penetrate into the exact nature of these difficulties. Parenthetically, I wish to express here my conviction that the strategic point in the relationship between the three fields is occupied by the psychoneuroses. So-called normality represents a much more devious and obscure way of dealing with the fundamentals of life than the neuroses do and it is correspondingly a much more difficult route to retrace. The psychoses, on the other hand, present mechanisms so recondite and remote that it is very hard for the observer to develop a truly empathic attitude towards them, and unless this can be done any knowledge remains intellectualistic, external and unfruitful. If a man's main interest is in the psychology of either the normal or the psychotic it is safe to predict that his understanding of the deeper layers of the mind will remain strictly limited. In America, however, thanks to the broad conception of psychiatry there prevailing, a psychia-

trist is less exposed to these dangers. Society will see to it that he is chiefly occupied with the problems of the psychoneuroses though his interest will extend along the mental hygiene movement in the one direction and into the field of the psychoses in the other. The problems of social adaptation, or maladaptation, will therefore always stand in the foreground of his attention.

It would be tempting to inquire how this broad conception of psychiatry came to be developed only in America. It is definitely a matter of the last twenty years. I am not familiar enough with the details of growth in this period to venture a firm opinion on the point, but my impression is that the change has been brought about by a developing attitude on the part of society in general quite as much as by the influence of a few outstanding personalities. It appears, in fact, to be an expression of the American social conscience. It is easy for Europeans to wax satirical over this conscience, for assuredly the raw guilt out of which it is evolved has at times produced manifestations grotesque enough to warrant any satire. But to ignore this would be a small error compared with the blunder it would be to ignore or underestimate the vast positive value of that social conscience. After all, perhaps the greater part of social progress emanates from an uneasy conscience, from dissatisfaction with a state of affairs unpleasant to our feelings or repugnant to our cultural sentiments. In the present case, for instance, the widespread social recognition that the psychiatrist's work—whether it is concerned with mental hygiene, with the therapy of the psychoneuroses or with the care of the psychotic—constitutes an essential unity would seem to have proceeded in large measure from a dawning realization that there exists in the community a vast amount of mental suffering to which attention needs to be directed.

The mention of the word "suffering" induces another reflection. It is noteworthy that, whatever pressure may have come from the side of society, the psychiatric movement in America to which I am now referring is essentially a medical one, is indeed an immense extension of the scope of the medical profession. It is not at first sight evident why this had to be so. *A priori* it might have seemed just as likely, and even more logical, if the increasing light thrown on mental problems had come from the side of the pure psychologist.



Just as in physiology, where an accurate knowledge of the normal processes of bodily functions must precede the study of their derangements in disease, it might have been supposed that the proper order would have been for psychologists to obtain insight into the structure and development of the normal mind and then for this knowledge to be applied to the investigation of various departures from the normal. The reverse of this has happened. Almost all insight into the deeper structure and development of the mind has come from psychopathology and it is only through this knowledge that we are beginning to understand something of the more obscure problems of the normal mind. It may sound paradoxical, but I venture to predict that in a not far distant future psychopathology, particularly of the psychoneuroses, will constitute the standard study of psychology, the basis from which the student will proceed later to the more obscure and difficult study of the so-called normal, and moreover I should not be altogether surprised if America achieved this consummation before any other country.

There are two objective grounds why this prediction is a very safe one to make. Investigation of the deeper layers of the mind has shown irrefragably that the basic elements out of which our minds are developed persist with the psychoneurotic—in the unconscious, it is true—in their original form to a much greater extent than they do with the normal, and further that they present themselves in magnified and perspicuous aspect as though under a clear lens, so that from every point of view they are far more accessible to examination there than with the normal. Fundamental complexes and mechanisms, the effects of which radiate throughout the whole mind, can be unmistakably demonstrated in the psychoneurotic when the same processes can often be only dimly inferred in the normal, and yet anyone who urges the objection that there is a qualitative difference between the two classes is merely displaying his omission to investigate the relationship between them.

The second ground on which the prediction can be based is even more interesting. We know nowadays that the reason why psychology has lagged so extraordinarily behind all other branches of science is because there exist in the mind—both, be it noted, of the subject and of the object—the most formidable obstacles that interpose themselves in the path of any exploration designed to pene-

trate below the surface. Unlike any other man of science, therefore, the psychologist is from the beginning cut off from the object of his study—the human mind. So far as our present experience goes, there is only one motive strong enough to overcome these obstacles—that of wishing to be delivered of suffering; even the keenest scientific curiosity offers only a very partial substitute for this motive. Now in the history of the world the theme of suffering has been the special concern of three classes of men: of poets, of priests and of physicians. Until recently it has been the first of these three, the poet, who has contributed most to our understanding of mental suffering and we owe some of our most precious insight to his flashes of genius. But his primary interest is, after all, not the understanding of suffering, but the transmutation of it into beauty or whatever would raise it to another plane. Few have thought more profoundly about the function of poetry than Keats, and he tells us:

“ . . . they shall be accounted poet kings

Who simply tell the most heart-easing things.”

The priest's interest, too, has been mainly therapeutic. Starting with a vested interest in a particular cure, he has been chiefly concerned with transmitting his cure to those in need. Nevertheless, the more profound theologians, having—so to speak—a scientific interest in their work, have also furnished us with much knowledge concerning the nature and sources of suffering. They have rightly laid especial stress in this connection on the importance of moral problems, notably on the problem of evil—nowadays called the problem of the sense of guilt. The physician likewise did not proceed very far so long as his attitude was a purely therapeutic one, showing once more how the passion for therapeutics—laudable as it is on humanitarian grounds—has always proved the bane of medicine and has blocked progress in real prevention and cure based on knowledge. Those over-anxious to heal cannot pause to find out how to do so. It is only when the desire to relieve suffering was infused by the scientific thirst for knowledge that we began to have serious insight, not only into the meaning of all this suffering, but—what is still more important—into the dynamic factors that move both the depths and the surface of our minds. In this achievement there is, in my opinion, one man's name that will forever be pre-

eminent, and that is the name of Freud, now so contemned, but in the future to be honored above all his contemporaries.

This expansion of psychiatry into what were previously non-medical fields was either stimulated by or, at all events, responded to the special social sense of the American people. It is appropriate, however, in addressing the new Psychiatric Institute of the New York State Hospitals to remember that, although the names of workers elsewhere—such as Dr. White of Washington and Dr. Putnam, Dr. C. Macfie Campbell of Boston—will not be forgotten in this connection, the main inspiration for the broadening and humanizing of the conception of psychiatry in America emanated from the forerunner of this institute, namely the Psychiatric Institute of the New York State Hospitals situated on Ward's Island. That inspiration will always be associated with the names of Dr. Adolf Meyer and Dr. August Hoch together with their brilliant pupils, Drs. A. A. Brill and George H. Kirby, who now by their presence on the staff of Columbia University link the two institutions that have cooperated in founding this impressive and promising Institute. In saying this I would not have you think that I underestimate the important part played, particularly in the mental hygiene movement, by lay cooperation. Although I think it desirable that the movement in question should always remain essentially a medical one, I am not one of those who think that laymen should be jealously excluded from psychiatric work, for I have ample experience of their value even on the therapeutic side itself.

The second event of the past few years to which I wished to make a short reference was the use American authorities made of psychopathology and psychology in the war. It is well known that this was more extensive and more enlightened in America than in any European country and I mention it here only as an illustration to confirm the thesis just put forward of the remarkable extent to which psychiatry in America has become associated with the national life and has ceased to be regarded as a narrow speciality.

The third event is perhaps the most interesting of all and will bring me closer to the theme of this address. I mean the extent to which knowledge of psycho-analysis has permeated psychiatry itself in America. When I was last here, before the war, psychoanalysts had certainly established a foothold, particularly in New

York, but they have extended this foothold only very slowly in the time that has elapsed since then. On the other hand, the extent to which a varying degree of knowledge of psycho-analysis has been accepted by American psychiatrists at large is truly noteworthy and is something for which there is no parallel in any country in Europe. Oddly enough, however, I think it could well be maintained that this open-mindedness on the part of American psychiatrists redounds less to their credit than might at first sight appear. For it looks sometimes as though they had purchased this open-mindedness by indulging in a certain superficiality, in fact at the expense of their imagination. To put the matter cursorily, and therefore very partially, it might be said that European psychiatrists have been loathe to accept psycho-analysis just because they realized it was a grim business, an affair of tremendous import from which they preferred to keep aloof, whereas American psychiatrists welcomed it as a novelty but failed to realize adequately its significance. This remark, like all such facile generalizations, is distinctly unfair, but what interests me is the modicum of truth it contains. If you find it over sharply expressed, perhaps you will allow me to put the matter in a more objective way. What concerns us here is the precise relationship of psycho-analysis to psychiatry, the extent to which psychiatry can profit from psycho-analysis, and—last but not least—the danger it is in of not securing this profit. I propose that we consider these questions in this order.

It has been said that the relationship of psycho-analysis to psychiatry resembles that of histology to anatomy. The point of similarity is evident; the one studies the finer details, the other the gross outlines. Let us see how far the analogy can carry us. It is hard for us nowadays to picture what anatomy was like before the discovery of the microscope, but we know enough to realize something of the revolution this instrument effected. It was not merely that far more became known about the actual anatomical structure of the various organs; more important than this was the contribution histology made to our knowledge of function and of genesis. This is a matter too obvious to need stressing, but the point I am making here is that just the same is true of psycho-analysis. The addition to our knowledge through the detailed study of the finer content of various mental processes, i. e., the purely interpretative

side of psycho-analysis, the revealing of the latent content of dreams, delusions and so on, interesting as all this may be, is relatively unimportant in comparison with the illumination psycho-analysis has thrown on the more vital problems of motivation and psycho-genesis; in other words, it can explain, not only what has happened, but also why it happened. The exploration of the unconscious layers of the mind, made possible for the first time by psycho-analysis, has yielded knowledge of such inestimable value for psychiatry and psychology that it is hardly exaggerating to term it a revelation. We are in fact introduced to a new world, the world of the unconscious, where all the important events take place, the results of which are simply documented in consciousness.

Though it is of course impossible for me here to substantiate the extensive claims by referring to the endless detail of which psycho-analytical work is composed, may I at least try to specify a little more definitely something of the nature of the contributions psycho-analysis has, in my judgment, made to the subject of psychiatry and to select for this purpose three particular considerations. It will be understood that I am using the word psychiatry here in the broad sense previously indicated and not merely as denoting the field of the psychoses. I am also speaking purely of its psychological aspects; of the relation of these to its organic aspects I shall say a word in conclusion. Well, to me the outstanding achievement of psycho-analysis in psychiatry is that it has given us for the first time a real comprehension of the meaning of mental morbidity. One may even go further and say it has taught us that mental morbidity has a meaning. Before the advent of psycho-analysis the prevailing view was that psychopathological symptoms had no psychological meaning; they were supposed to represent—from a psychological point of view—meaningless manifestations of a breakdown on the part of the mental apparatus. Various toxic and other organic influences were supposed to derange the brain and the resulting symptoms were believed to be as meaningless as from a musical point of view the jangling sounds are meaningless that result from a clumsy weight crashing on to a piano. The infinitely detailed investigation of such symptoms by means of psycho-analysis has shown that they are full of meaning to their finest ramification, that they are throughout informed with purpose, with intent and with



aim. The achievement of imaginary gratification, the allaying of guiltiness and remorse, the protection against the most terrible dangers—all these are processes that we are as yet very far indeed from being able to express in any other than psychological terms.

One of the most startling discoveries psycho-analysis has made of a general nature is that most of the phenomena comprising a mental disorder are symptoms, not in the Greek sense of morbid casualties, but in the modern sense of indicators. But they are indicators not so much of disease, except by implication, as of a healing process. This is a point of view that had hardly been suspected before psycho-analysis, and it is one that has important therapeutic as well as pathological bearings. It means not merely that the delusions of the paranoic, the phobias of the hysteric and the obsessions of the obsessional neurotic are not the disease, but signs of a disease—so much had been conjectured previously—but that they are the products of an attempt to heal the underlying disease. Appreciation of this must radically affect our attitude towards such phenomena in our therapeutic endeavors. By merely thwarting them an apparent success may be achieved that is purchased by a worsening of the disorder itself underlying them, one which may then manifest itself in more sinister ways.

In the second place, we know at last something—in fact a great deal—about the nature of this underlying disorder, the disease itself if we use the word in a broad and not too medical a sense. It may fairly be said that before psycho-analysis not even the site of the lesion was known, to say nothing of the nature of the lesion. This site is nothing more nor less than the unconscious mind, a region of the universe the very existence of which was only vaguely surmised before psycho-analysis explored and defined it, and yet one which is almost certainly of greater practical importance to humanity than consciousness itself. The disorder underlying all mental morbidity can be defined as a failure on the part of the ego to deal in any final manner with certain fundamental intrapsychical conflicts that are the inevitable lot of every human being. These conflicts arise from the difficulty in adjusting the claims of the sexual instinct in its earliest stages with those of other psychical forces. The integrity of the ego needs on the one hand secure possession of certain sexual impulses, or their derivatives, and on the

other a secure relation to external reality. It is threatened if the conflict in question is not solved and the ultimate danger menacing it is paralysis of mental functioning, a hypothetical condition to which I have given the name aphanisis, one to which some approximation is found in the dementia of psychotics and the inhibitions of psychoneurotics. All mental morbidity is therefore a state of schizophrenia, although Professor Bleuler has proposed to reserve this term for the most striking of its forms. What we meet with clinically as mental disorder represents the endless variety of the ways in which the threatened ego struggles for its self-preservation. In the nature of things, therefore, our conception of it can be cast only in terms of active dynamic strivings.

The third psycho-analytical contribution to psychiatry I would cite is its extension of psychopathology into the realm of aetiology. It has long been surmised that certain psychoses were due to errors in development—indeed, with idiocy it is obvious—but the investigations of psycho-analysis have been able to establish this as a general proposition. What is termed “fixation”, with the closely allied “regression”, is a fundamental concept in psycho-analysis, and from this point of view it may fairly be said that all mental morbidity signifies an arrest in development. A potential neurotic or psychotic is someone who still carries about with him a conflict which is normally solved in infancy; he is someone who has never successfully passed a given stage of infantile development. Various precipitating factors decide whether this state of affairs will come to expression in the form of symptoms early or late in life. The relation between the arrest in ontogenetic development and particular difficulties in the phylogenetic history of humanity open up a fascinating chapter, to which psycho-analysis has already made promising contributions. To sum up the three considerations just advanced, psycho-analysis has provided psychiatry with an interpretation, a dynamic and a genetic point of view.

We may now profitably compare what I have said about American psychiatry and about psycho-analysis respectively. American psychiatry has the distinctive feature of breadth. It has already absorbed the psychoneuroses in its scope and is making serious encroachments into normal psychology. The three fields have to be united, and American psychiatry and psycho-analysis are the two

movements that are most alive to this truth. It was dimly perceived many years ago by Hughlings Jackson when he made his famous remark: "Find out about dreams and you will find out about insanity". It was Freud who found out about dreams and applied his findings to insanity, but it is to be noted that he found out about dreams by applying a psychopathological method derived from the study of the neuroses, thus uniting the three fields. If one takes the trouble to appreciate at their full value the three psycho-analytical points of view I have just sketched it must be evident that psycho-analysis, while coinciding in its aims with the psychiatric ones we considered earlier, is still broader in its scope. Any attempt, therefore, to dismiss psycho-analysis to a corner of a chapter on the therapeutics of psychiatry, as though it were an alternative to hydrotherapy or a sub-variety of suggestion, is simply to exhibit ignorance of its meaning and significance. When the doctrine of evolution made its appearance, it had either to be denied *in toto* or else to fertilize the whole biology, to cause natural history, embryology and comparative anatomy to be viewed afresh in a flood of light; even its bitterest opponents, to do them justice, realized that to have regarded it merely as a contribution of detail would have been simply foolish. Yet there is today a real risk of a corresponding blunder being committed with psycho-analysis. The forces of repression which veil first the existence and then the significance of the unconscious are hard to overestimate in their strength and subtlety; to accept a discovery with lip service and subsequently to discount the importance of it, is only one, though a potent one, of its workings. To my mind there has never been any likelihood of psycho-analysis being stifled even by the most relentless opposition. But there is a very real danger, particularly in America, lest the gifts it can confer on psychiatry be put aside for long through complacent acceptance without proper appreciation of their value. This, in one word, is the message I make bold to bring from psycho-analysis to American psychiatry.

I have said something about the relation of psycho-analysis to the psychological aspects of psychiatry. What, now, is its relation to the organic aspects? I need not correct here the vulgar misconception that psycho-analysis ignores the organic factors in mental disorder. Psycho-analysis has, it is true, to point out that attention

has been too exclusively focussed on them in the past, to the neglect of the psychological factors, and it has tried to restore a due proportion between the two sets. The same holds good for bodily disease in general, for it is probable that mental factors play a considerable, and possibly even an important, part in this field also. Into the vexed question of the connection between mind and body I do not propose to enter, my point of view here being purely clinical and empirical. But how is one to bring together the two indisputable facts that unconscious conflicts and bodily poisons may both operate in the production of mental disorder?

I hinted earlier that the ego, the kernel of the personality, on the integrity of which mental health depends, has two essential tasks to perform and two corresponding difficulties or dangers to cope with. It has to assimilate, and to respond adequately to, stimuli proceeding from two very different sources, from perceptions of the outer world and from stimuli arising in the inner world respectively. It has not only to do this, but also to bring these two sets of stimuli into some sort of harmony with each other. Psycho-analysis finds that these tasks are much more formidable than is commonly thought, and that they are very rarely carried out with any degree of smoothness. It can point to endless imperfections in the performance of this task—for it is in essence a single task, the uniting of the inner with the outer world, of the demands of the instincts with the demands of reality. When the imperfections are gross, mental morbidity will surely result. When they are less so, the issue, wavering in the balance, may be influenced by changes in the forces with which the ego has to deal. Changes may occur in the demands on the part of reality, through the fluctuating circumstances of life and of human relationships, and changes may take place in the insistence of the inner needs, for example, at various times of life, puberty, climacteric, and so on. But not only may there be all these manifold variations in the task set the ego, but the capacity of the ego to perform it may also be affected by factors directly influencing it itself. By these I mean somatic factors, principally—so far as we know—toxic ones. We are all familiar with the profound alterations in mental functioning that can be induced in this way, but the contribution psycho-analysis has been able to make is to demonstrate the nature of these alterations. They are

the very same as those in the other case we considered previously, where the ego, without being weakened by any somatic influences, has proved unequal to its great task. The mental morbidity represents—in the organic just as in the psychogenic cases—the triumph of the imperfectly controlled unconscious impulses.

That this conception of mental morbidity can, thanks to recent researches, be seen to reign over the whole field, in both the psychogenic and the organic realms, is a scientific generalization of supreme theoretical interest. The knowledge gained from it must enable us to direct our prophylactic and therapeutic efforts more intelligently than before. The immediate practical application of the knowledge is another matter. The work done by Ferenczi and Hollos on the psychology of dementia paralytica and by Tausk and Kielholz in respect of the alcoholic psychoses have shown that the mental manifestations of these disorders are in no way to be explained as a direct result of the toxins concerned; they are expressions of individual conflicts which can no longer be coped with by an ego weakened by the cerebral poisoning. Obviously this discovery has no immediate bearing on the necessity of dealing with the toxins, but nevertheless the suggestion that the more stable is the relation between consciousness and the unconscious the less liable is the mind to be disturbed by toxins may well prove to have important practical applications in the future. At the other end of the scale, there is no doubt that where the ego shows spontaneous failure to cope with its task, can, at least at present, only be psychological. In the intermediate cases, where the aetiology is more mixed, the decision of which is the most suitable mode of attack will of course be a matter of judgment, and there will be some in which both are indicated. There is thus no contradiction whatever between the psychological and the organic points of view; they are of necessity inter-related.

We have not, however, exhausted this inter-relationship by the consideration just advanced, which is concerned with only one way in which bodily factors can affect the mind. Quite apart from the direct influence of such factors in weakening the ego, we have to remember that the very existence of any bodily disturbance is in itself a psychological fact the importance of which to the mind may be very great and indeed momentous. On the other side, that the



mind can affect the body is well recognized, though in my opinion the extent to which it can do so is still very much underestimated. It is not merely that psychogenic disorders, e. g., hysteria, often express themselves by disturbances of bodily function where the physical symptoms actually symbolize various mental processes. There are many other ways in which mental disorders, e. g., in the anxiety states, can affect somatic functioning more directly and can produce even structural changes with or without the cooperation of somatic factors. Finally, there remains what may perhaps prove to be the most important consideration of all. I refer to the probability that conceptions generated in the field of psychopathology, such as, for example, the connection between the pleasure principle and relief of tension, may in the future be applied to corresponding mechanisms in the somatic field and thus become established as biological principles of unconjecturable significance.

From all these considerations it will be evident that pathological psychiatry, i. e., that part concerned with somatic changes, forms an essential link between internal medicine on the one hand and psycho-analysis on the other, indeed, one might say between medicine and psychology in general. It will not be the only one—genetics or endocrinology, for example, may rival it in importance in the future—but it will surely remain an indispensable one. More novel, however, is the conclusion that psycho-analysis must become an increasingly important link between medicine and psychiatry on the one hand and the whole of society on the other. There are already a few feeble links of the kind, physical hygiene being perhaps the most prominent. But when one reflects that there is no aspect of human endeavor that can long remain unaffected by psycho-analysis—from ethnology to politics, from education to sociology, from art to economics, from philosophy to religion; in short, the whole fabric of civilization—then we must see that today we are witnessing the birth of an enormous widening of medical endeavor and of the significance of medicine in the body politic. And in this widening, psychiatry, as one of the links between psycho-analysis and medicine, will, I trust, play an honorable part.

## SOME OBSERVATIONS ON CATATONIA\*

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I regret that I have no real contribution to make on an occasion such as this dedication which marks another epoch in the field of psychiatry. I merely intend to relate certain clinical observations made by our group at Wisconsin, not so much for their inherent value but rather because these and other results have been largely realized from cooperative research in which the combined experience and knowledge, as well as interest of scientists outside of the field of psychiatry, are focused upon psychiatric problems.

During the last few years we have sought by physical and chemical means to favorably influence the course of certain psychotic states. Among such, the stuporous catatonic patient has been of special interest. We believe that few other, if any, mental states are as definite in their external manifestations as this condition. Pronounced cases are almost photographic reproductions of each other. Apparently previous personal experiences, racial origin, physical environment, intellectual attainment, physical endowment, or any of the grosser differences commonly found among individuals, leave no impression upon the outward or evident manifestations of catatonic stupor. When one further considers the variety of conditions under which this state develops, one is led to conclude that it represents a complex reaction for which there exists a nervous mechanism not unlike a neuronie reflex. Under certain conditions this mechanism is energized into activity. What agent serves as the dynamic element is still conjectural. That certain chemicals can profoundly alter this manifestation will be pointed out. How such fact can be correlated with the various theories concerning origin remains an open problem.

The catatonic shows more pronounced disorder at the physiological level than most other so-called functional disorders. This has stimulated our efforts to study this condition at the physiological level. For the moment we are not concerned with the question of whether we are dealing with cause or effect. The mere fact that a

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disorder at the physiological level exists is in itself worthwhile information. In short, we see no narrow trail leading to a solution of this and other clinical problems in psychiatry. We have elected to inquire along one relatively narrow line in attempting a study of the demonstrable alterations of physiological function, leaving to others better equipped the psychological and organic aspects of these problems, firmly believing that all such inquiries are equally important.

During the last few years, and especially during the last six months, we have observed some extremely interesting reactions in the stuporous catatonics treated with a variety of quite unrelated substances. The initial observation was accidental. In the course of some work with respiratory stimulants in association with Dr. A. S. Loevenhart, I observed a change in the behavior of a stuporous catatonic. This was in 1916. We selected, among others, some cases of catatonia as offering a physiological level of activity in which the respiratory function is at the vegetative level. The rate and amplitude of respiratory movement appear to be least influenced by psychic or environmental circumstances.

These patients, because of their inactivity also permit of attachments for kymographic tracing and generally serve as excellent subjects to study the influences of respiratory stimulants.

At that time we were using a fiftieth normal solution of sodium cyanide by intravenous route. We observed in the course of respiratory stimulation a change in the stupor of one of these catatonic cases. This patient had been mute for a long time and presented the typical fixed, rigid attitude so characteristic of this condition. After a period of respiratory stimulation the patient relaxed from the rigidly held posture, the eyes opened, the facial expression appeared animated and a few intelligible and relevant replies were obtained to our questions.

We were impressed with this interesting response at the time but, owing to our occupation with an important clinical problem, and our later military affiliation, no further investigations were attempted along this line until 1928, at which time we repeated our former experiments and obtained the same results.

Upon theoretical grounds, and as a consequence of previous work by Loevenhart, carbon dioxide gas was used to stimulate respira-

tion, and produce, if possible, a psychic response similar to that previously observed with the use of sodium cyanide. It was found that mixtures of carbon dioxide and oxygen under certain conditions, when inhaled, produced the same phenomenon, though more pronounced than that observed with the use of sodium cyanide. That is, the mutism and muscular rigidity could be made to disappear by carbon dioxide and oxygen inhalations.

This has been frequently repeated in a large number of cases with variable responses which will not be discussed here, excepting to state that some extremely interesting accounts have been obtained from patients aroused from their stupor. We found that in the most favorable responses this period of apparently normal psychic function, as judged by their capacity to understand and respond, lasts from 10 to 20 minutes.

In our report we suggested the probability of direct cortical stimulation by variation in the carbon dioxide concentration causing different levels of intracellular oxidation. In the light of further observations now being reported I doubt the explanation formerly made as accounting for the psychic response seen in these catatonic cases.

As a preliminary statement, I wish to say that we have been interested in attempting to find some better means of meeting some of the practical clinical problems in psychiatry and, entirely apart from our work with catatonia, a number of sedative drugs have been investigated during the last five or six years.

About six months ago Dr. W. J. Bleckwenn at the Wisconsin Psychiatric Institute, was working with some barbituric acid derivatives in an effort to produce long sleep in various conditions of excitement. He found the sodium salt of iso-amyl-ethyl barbituric acid (sodium amytal) to be very effective as a hypnotic in a number of different psychotic conditions.

The chemical constitution and pharmacological properties of this drug will not be discussed here other than to state that when given by either intravenous or intra-muscular route in appropriate dosage it very rapidly produces in the human a state of deep narcosis. Because the muscular relaxation is so complete and the state of narcosis so rapidly induced, we were interested to observe what effect such a powerful and rapidly acting narcotic might have upon

catatonia. Hence several cases were given sodium amytal in dosage sufficient to produce narcosis in a normal individual of approximately the same body weight. It was found that cases of catatonic stupor responded to this narcotic quite like a normal individual. That is, within 4 to 5 minutes, and before a total of 10 to 14 c. c. of the solution are injected they sink into deep sleep. The muscular rigidity disappears; the reflexes are abolished; breathing becomes slow and quite shallow; the systolic blood pressure falls 30 to 40 millimeters of mercury. After an hour the blood pressure returns to its former level; the patient can then be aroused and will respond to painful stimuli. Then follows a period of what appears to be normal sleep, the duration of which is largely determined by noises or other disturbing environmental influences.

In the stuporous, catatonic cases we have seen prolonged periods of mental clearness following the state of deep narcosis. A brief account of one such case will serve to illustrate the striking change in mental condition, which is being presented.

CASE—T. W. (female); age 27; married and the mother of two children. Nothing of note in early life; academic education and a school teacher before marriage. Psychosis developed slowly and characterized by odd behavior, ideas of reference, resembling a rather typical dementia præcox syndrome. Patient at times frankly admitted being unhappy at her lot in life, that of a farmer's wife and married to a man who was her intellectual and cultural inferior.

While in the state hospital she gradually became less and less communicative and finally became mute, negativistic and ultimately catatonic. She had been in a state of catatonic stupor for a period of four months when she was admitted to our service and sodium amytal administered. At this time the patient showed rather extreme muscular rigidity; active negativism; her limbs, head and body in a flexed position resembling the fetal posture. She had been tube fed for over four months and voided involuntarily. Furthermore, she was in a state of extreme emaciation, weighing 66 pounds.

This patient was given  $\frac{1}{2}$  gm. of sodium amytal dissolved in 10 c. c. of distilled water by intravenous route. Within 5 minutes she was in a state of deep narcosis. The muscular rigidity had disappeared; all reflexes, including the corneal, were absent. She



continued in this state of deep narcosis for about an hour and then continued at a level of unconsciousness which could be influenced by slight painful stimuli. She remained in this condition another three hours, or a total of 7 hours, after the time of the injection. She was then aroused by speech and she responded to conversation, asked for food and drink. She continued in this aroused mental state for a period of four hours, when no further efforts were made to keep her awake and she then dropped into what appeared to be a natural sleep for a period of five hours, when the mutism, muscular rigidity, and active negativism slowly redeveloped.

This patient has been repeatedly treated with sodium amytal and similar reactions have been invariably observed. During this stage of mental clearness many extremely interesting thoughts have been expressed.

The most striking and, in some respects, pleasant behavior has been the voluntary request for food. This patient ordered a large meal, all of which she ate with apparent relish. She drank large quantities of fluid. She expressed a wish to go to the bathroom, to which she was assisted. She was found to be remarkably clear as to current events. The most trifling happenings within her possible sphere of knowledge seemed to be accurately recorded. This awareness of outside conditions was strikingly demonstrated when she inquired as to the progress of a football game which was being played between Wisconsin and Purdue. This game was actually in progress on this Saturday afternoon when she was aroused for the first time. She inquired as to the score at about three o'clock, at which time the game was being played.

She was asked whether she slept in her stupor, and remarked that *presumably* she slept because there seemed to be lapses. On the other hand, she voluntarily stated that it seemed everything said or done in her presence was clearly known to her.

It is fully realized that this awareness of environment is known to be present in these catatonic stupors, but the accuracy with which these patients register even trifling occurrences impresses one with the need of paying more heed to the environmental conditions than is ordinarily practiced.

She could not account for her refusal of food other than she wanted to be released and allowed to go home and take care of her

baby. When her baby was mentioned she cried. At a subsequent time, after she had had several good meals, it was pointed out to her that she had gained 8 or 10 pounds. She remarked that this pleased her and that she could afford to gain weight, and she smiled. We are impressed with the emotional reaction shown by this patient, as well as others, during this phase as being appropriate and adequate.

Time does not permit to go further in this account of the decidedly normal mental condition that this and other patients show following the stage of somnolence and narcosis induced by sodium amytal. Enough cases have already been studied to satisfy us that we are not dealing with an individual response. Among these other cases is one that has been in a catatonic stupor for over two years. In this case the same response was obtained as already described. So far every case has shown the phase of narcosis, muscular relaxation, disappearance of negativism, followed by sleep and a lucid mental period. The latter, lasting for periods of several hours is then followed by another period of apparently normal sleep which gradually develops into the former state of catatonic stupor.

I am merely reporting an observation and not attempting an explanation. The unknowns involved make even speculation a somewhat hazardous venture.

Why one person develops a catatonic stupor and another, or the same person, at another time, a form of excitement, is an unknown. How to correlate the similar response from sodium cyanide, carbon dioxide and sodium amytal is difficult if not impossible and constitutes another unknown.

It is true that the cyanides are internal asphyxial agents and as such interfere with cell oxidation. Breathing carbon dioxide may cause a similar chemical and physical neural state but the barbituric acid series are chemically and pharmacologically unrelated to either of the other agents and are not, directly at least, concerned with oxygen metabolism; unless one assumes that the vascular dilatation of cerebral vessels reported by some investigators, with the marked fall in blood pressure in humans observed by Bleckwenn, causes a relative vascular stasis and a consequent disturbance of intracellular oxidation.

Instead of seeking an explanation along these lines I prefer to account for this phenomenon on the basis of an induced narcosis; a state of deep unconsciousness so profound as to inhibit or dislodge the mental mechanism responsible for the stupor and catatonia.

The fact that our best results with carbon dioxide and oxygen were obtained in cases carried to the point of narcosis, and the further fact that we are now able to produce more prolonged periods of complete relaxation and, subsequently, periods of apparently normal psychic function by the injection of a powerful narcotic agent, leads me to believe that it is not a question of a specific drug but rather the reaction of another profound uncontrollable mental state which disturbs or dislodges the mechanism for catatonia and stupor.

It is interesting to note that these patients do not develop a phase of catatonia as they emerge from this state of deep narcosis; but only after a period of contact with the outside world does the stupor and catatonia recur.

It is interesting to consider here the work of Zador. He used nitrous oxide gas and found but little influence upon the stupor and mutism in catatonic cases. This can possibly be explained on the basis that a state of deep anesthesia or narcosis had not been produced. In fact, I believe he sought to remain more or less at the initial phases of general anesthesia and thus very likely never reached the depth of unconsciousness produced by sodium amytal in the dosage we employ.

Thus far all that has been accomplished by us amounts to a means of altering at will a very distinct and profound mental abnormality. The simple but practical contribution in the problem of physically treating these resistive cases will possibly be appreciated by those who deal with daily tube feeding. It is convenient indeed to have such a patient order food and fluids in large amounts and take them with relish.

From the standpoint of further knowledge concerning the genesis of catatonia, nothing has been contributed other than a method of making an approach upon an otherwise inaccessible mental state and opening the door, so as to speak, for further psychological and physiological investigations. It offers the opportunity to observe the development of catatonia as a daily incident.

The immediate psychological and physiological antecedents to such an incident can be repeatedly investigated in the same patient.

There is much in the behavior and response of these patients, after a period of lucidity and as they return to catatonia, that supports the suggestion of this stupor serving as a refuge from reality. The psychological material obtained from these patients during the contact permissible by this lucid interval will be especially interesting to those holding views on the psycho-genesis of these conditions.

In closing, I wish to return to our first statement in reference to cooperative research. If I may be permitted to apply our limited experience to an occasion such as this, when a Psychiatric Institute is being dedicated to the furtherance of scientific knowledge, the thought uppermost in my mind is that we have already learned that psychiatric problems, if not all problems of medicine, demand the point of view and knowledge of not merely clinicians but those qualified in all the basic sciences. What little success has been realized by us has come largely from associations formed with the various departments of a large university. We are also impressed with the research efforts that are now going on throughout this country and believe that a survey of this situation would disclose an amazing amount of interest at the present time in psychiatric investigation. It, therefore, occurs to me that this new and fully equipped Institute might undertake, among other things, the problem of planning and correlating such research, to the end that specific problems might be assigned to groups or individuals. We realize that certain research efforts are reflections of a personal interest on the part of the investigator, while others are determined by available material or association with scientists in other fields. It seems to me that this situation could be studied and a general group organized to plan investigations and assign tasks, keeping in mind primary interests and opportunities.

The New York Psychiatric Institute, which we regard as the parent of neuro-psychiatry in this country, with its record of achievement under a series of illustrious directors from whom many of us received not only information but invaluable inspiration, might well serve as a sort of clearing house for research in America.

## PSYCHIATRY AND THE CRIMINAL LAW\*

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I realize clearly the highly controversial nature of this topic, but I shall attempt to approach it in a non-partisan spirit. Anyone with much experience of cases involving the evaluation of the mental health of an accused person cannot help being impressed not only by the gravity and difficulty of the subject, but also by the diversity of opinion expressed by medical men, lawyers and the public. This lack of unanimity has led to quite unworthy recrimination, which has ventilated itself in the public press, and has unsettled public opinion. The relationship of mental illness to criminal law procedure is of international significance, and a more or less world-wide social problem. It is generally agreed that mental inefficiency in a wide sense, plus mental deficiency, contribute in no uncertain way to participation in criminal conduct. And this, perhaps, is seen in its purest form in cases of juvenile delinquency.

The development of the juvenile court system, a system which lays emphasis on the elucidation of the factors leading to crime, its prophylaxis, and the treatment of the individual as one who is suffering from a serious illness, is the ideal to which we should strive. The idea inherent in it is to socialize the delinquent, and make him a contributing and self-respecting member of society.

It is this social side of psychiatry which appeals to me so much. By prosecuting work along social lines psychiatry will come to occupy a much more prominent place in the forefront of preventive medical work than heretofore. The time for arbitrary rule of thumb methods has passed, the retributive, expiatory idea in criminal justice is dead, and the prison system as a method of treatment has a lack of elasticity which makes it fall far short of success. That is a sweeping condemnation, but it is amply proved by the huge army of recidivists, the "ins and outs" of the prison system. East, for instance, has reported that out of a group of approximately 700 convicted delinquents, 68 per cent had previous convictions, the

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number of convictions in all totalling 3,296. The questions we must ask ourselves are: (1) Is there any substitute? (2) Can we do better than has been done in the past? Let us get to the heart of the matter at once. We will never progress if we quibble over details, and the question we should put to ourselves and the public is this: Ought the person either of unsound mind, or of so defective an intelligence as to be socially unfit, be held liable under any circumstances for a crime which he may have committed? I would emphasize the importance of the words "under any circumstances". We have never taken a bold enough stand. The matter of degree in relation to mental disorder has been tolerated far too long. We should not be side-tracked by the question as to whether it is a "total" or "partial" alienation; we must have the courage of our convictions and our medical knowledge and state that a person of unsound mind or a socially mentally deficient person can not be judged and treated by the standards demanded for the rest of the population. "That which in fact is a condition of mental disease cannot in law be a condition of mental health." If a person suffers from heart disease we determine the site and type of lesion, weigh up the symptoms, and estimate the degree of help necessary for the maintenance of adequate compensation. Some forms are less severe than others, but still the general description is one of heart disease, and at any time, even in the mildest case, a failure of compensation may occur and a train of symptoms appear which it is impossible to control. In mental disease, no matter how slight, we have a similar situation when compensation fails, we have a response which may take on a sequence of events of the utmost gravity quite beyond the patient's control. Because of this our argument should be that the accused is of unsound mind and his symptoms are so and so, but the tendency has been to put the accused's symptoms into the forefront, and then to estimate the degree of his unsoundness. That is illogical, and cloaks the main issue.

A review of the whole matter from the development of legal procedure in criminal cases sheds a new light, and forces the view that as doctors we have been needlessly unjust, and have not sufficiently taken into consideration the fact that the lawyers in stating their case and opinion have based it on the medical knowledge of the

period. We have scoffed at the comparison between a man of unsound mind and a child of fourteen years, we have laughed at the "wild beast test", and we have considered the judges who formulated the M'Naghten Rules as callous old dotards who did not know any better. The lawyers, on their side, have looked upon the doctors as crack-brained sentimentalists who were unable to call a spade a spade. Is it necessary for us to make so much fuss about the difference of opinion existing between doctors and lawyers? Have there not been faults on both sides? There are fads and fancies in medical practice popular and believed in only for a brief season, and that being so, I am more inclined to the side of those who say that it is foolish for the law to change with every changing vogue of medical opinion. In any case it cannot be too strongly emphasized that the witness box is not the place for propaganda and for medical theory. The medical witness is still, too often, an advocate for the defense. The law, after all, has to deal with facts, with all the facts, and it should be based on assured knowledge and on opinions which are generally accepted; I mean by generally accepted, accepted not only by the medical and legal profession, but by the public, whom we must take with us. If we are dissatisfied with the law as it stands today, then it is our duty not merely to educate the lawyers, but to instruct the public, and instil in them a knowledge of our settled views and principles. It is only then that we are likely to have unanimity. It may be that a long time will pass before this is accomplished, but it is better to make sure rather than to have new legislation thrust upon the public before the public are educated to appreciate it. The issue is not merely a medico-legal one, but a tremendously important social one, which must be fairly balanced. In order to get a clear perspective allow me to recapitulate, in a summary way, some of the developments which have occurred in criminal law procedure. I shall try to stick to essential points.

The bulk of the controversy in recent years has concerned itself with attempts to modify and recast the M'Naghten Rules but if we look back to an earlier period we will see that the real difficulty started in the time of Hale (1670-1695) when he talked in terms of partial and total insanity which he attempted to distinguish in this way. He said, "There is a partial insanity and a total insanity. The

former is either in respect to things—*quoad hoc vel illud insanire*—some persons that have a competent use of reason in respect of some objects are yet under a particular dementia in respect of some particular discourses, subjects, or applications; or else it is partial in respect of degrees, and this is the condition of very many, especially melancholy persons, who for the most part discover their defect in excessive fears or griefs, and yet are not wholly destitute of the use of their reason, and this partial insanity seems not to excuse them in the committing of any offense for its matter capital". Later, and with more insight, Hale stated that the invisible line dividing "total" and "partial" insanity was not easy to determine, and it was then that he drew his analogy between a person laboring under some form of melancholy, and yet had as great an understanding as a child of fourteen years, that then such a person may be guilty of treason or felony. The above statement of Hale's takes into consideration the intellectual and affective mental disorders we are now familiar with, but it fails to appreciate that such states are in every sense total reactions, and, most unfortunately, it introduces the term "partial". *It is the juggling with this term "partial" which has led to more difference of opinion than anything else.* Some have considered "partial", as Hale does, in relation to form and degree, whereas others have considered it as something intermittent, akin to what we term a lucid interval. Whether or not Hale adopted these terms from the medical men of the time I do not know, but in any case the medical men of the time acquiesced in their use, and the question of "degrees" or "partiality" has never been allowed to rest since.

In the latter part of the 18th century Erskine's defense of Hadfield is memorable owing to the fact that Erskine proved that the accused's act had been determined by his delusions, and that, therefore, the accused was not responsible. Erskine convinced judge and jury that such a form of mental disorder was not partial but went to the very depths of the individual's personality. This trial influenced opinion to such an extent that an act was passed whereby a person acquitted of any treason, murder or felony because of insanity at the time of the commitment of the offense, or where a person brought up either to plead or to be discharged for the want of prosecution is proved to be insane, the court may order his detention during His Majesty's pleasure.

In 1843 the M'Naghten case occurred, and while this marked a further epoch in medico-legal procedure it seemed to reopen the old controversy. It was in M'Naghten's case that the argument concerning the differentiation between a "partial" or a "total" insanity became acute. Hale, it will be remembered, defined "partial" in terms of kind or degree, and held that this "partial insanity" under certain conditions, was not an excuse for the committing of a capital offense; whereas Cockburn in the M'Naghten case referred to "partial" insanity, meaning a monomania or paranoia, as an adequate defense. I am not going to weary you with a recital of the M'Naghten rules or case, but I may be permitted to quote a sentence from Mr. Cockburn's address to the jury for the defense. He said that he did not bring the case forward as one of complete, but of "partial" insanity, of what a great French authority had denominated homicidal monomania. He trusted he had satisfied the jury by the authorities he had quoted that there existed such a disease as "partial" insanity or homicidal monomania, in which the unhappy patient, acting under the influence of instinct, was led on by delusion to commit crime for which, morally, he could not be held responsible. Orange commenting on the use of the terms "partial" and "total" describes it as a non-natural division, but adds that it was quite evident the term "partial" delusion was acquiesced in, and received the support and concurrence of the medical witnesses. "It is difficult to understand," he said, "what exactly is meant by a "partial" delusion, and yet, as will be seen later on, this very inexact term found its way into a document by which judges have for the last half century considered themselves to be bound." (There was not even unanimity of opinion among the judges themselves. Lord Campbell believed that it was essential to prove that insanity existed at the time the act was committed, and that such insanity was the immediate cause of the criminal act; otherwise for those suffering from "partial" insanity there was no immunity from conviction and punishment. Lord Campbell had apparently in mind intermittent types of mental disorder; whereas Lord Brougham explained that what he meant by the term was more properly explained by the term monomania.) It is evident that the lawyers were using terms which never had been closely defined, and which were capable of a variety of interpretation. We need not

be surprised at this, because in 1876—more than thirty years later—we find Maudsley in his book on “Responsibility in Mental Disease” continuing to use the terms “partial” and “total” insanity in an indiscriminate and uncritical way. If a man of Maudsley’s knowledge, standing and ability was so unclear in his medical conceptions, how could we expect lawyers to formulate better standards of procedure. The influence exerted by Maudsley may be partly gauged from the fact that Oppenheimer, in his book on Responsibility, makes the remark that “Sir James Fitzjames Stephen accepted as gospel every word that Maudsley wrote, and tried to insinuate into law the purely speculative opinions of that distinguished writer.” An example or two will make the matter clear. Maudsley used the term mania as applicable to insanity in general, and applied it to intellectual and affective states indiscriminately. Furthermore, Maudsley divided “partial mania” into monomania and melancholia, “depending on the prevailing affect”, and stated that some cases of melancholia provide the most striking examples of “partial” insanity, and this because there is great intellectual derangement in cases with melancholic depression. The matter would be ludicrous if it was not so serious. Most present-day psychiatrists when they have used the term “partial” insanity or when they have heard it used, think of it only in reference to delusional states; that at least has been my personal reaction, and it was only on reviewing the whole matter in this way that the significance and danger of the term appeared. That melancholia or mania should be designated as a “partial” mental disturbance seems outside the bounds of possibility, but I have shown clearly how the term “partial” is not only inadequate, but an absolute misnomer impossible to define. The fact that in melancholic states lucid intervals occur, should not complicate the situation, because such lucid intervals are entirely different from what was meant by the term partial. The bigoted, uncritical point of view of Maudsley exerted a powerful influence on medical opinion in Great Britain, and probably led to antagonisms in the legal profession. He said, “It is notorious that the acquittal or conviction of a prisoner when insanity is alleged is a matter of chance. Were the issue to be decided by the tossing up of a shilling instead of by the grave procedure of a trial in court, it could hardly be more



uncertain: the less insane person sometimes escapes, while the more insane person is sometimes hanged." We want to get away from dangerous generalizations, to stabilize the situation, to formulate our principles and stick to them, and not be upset and flustered by each new trial as it comes along.

Up until comparatively recent years medical knowledge regarding mental disorders has been so deficient, so inexact, as not to be an adequate guide to those who have been administering the law. The doctors have not allowed sufficiently for the flowers of speech of legal opinion, nor for the spirit of the times, but have been too narrow and literal minded. A year or two ago Sir Ernley Blackwell of the home office, speaking at a medico-legal society meeting in London, stated that for fourteen years it had been his duty to examine closely the facts concerning nearly four hundred cases of persons sentenced to death. In half of these cases the prisoner had been executed, but he had no reason to suppose that anyone mentally ill had been so disposed of. He had followed the records of many of those who had been found insane, or guilty but insane, and a great many never showed any mental symptoms whatsoever, or at all events no signs of the particular insanity which was alleged at the trial. This statement is extremely reassuring in some respects, but it is not very flattering to our medical knowledge and diagnostic skill.

It may seem as if this paper was written in support of the legal profession, but it is far from my thought to enlist the sympathy of the legal profession at the expense of my own. But I don't think we have given the law sufficient credit for advances which have been made, and for the fairness which has been shown in its administration. The reason why further changes and modifications have not taken place in the law is due, in my opinion, just as much, if not more, to poorly formulated and sometimes unduly biassed psychiatric viewpoints rather than to any lack of receptivity on the part of the legal profession.

During the past twenty-five years, the pioneer work of Kræpelin, Bleuler, Adolf Meyer and Healy, to mention only a few, has brought order out of chaos, and has allowed us to define our terms in a way not possible previously. The classification of mental disorders is approaching orderliness, the symptoms are more fully understood,

and we are inquiring much more closely into the reasons why such symptoms have been produced, and to what underlying motives they are a response. Because of this I believe that some effort should be made to restate the position anew. The tendency is to become flustered, and perhaps to arrogate to the psychiatrist a rôle which he has not had the training to fill.

In Scotland, the matter as it stands today is somewhat as follows: In any case of major crime, where there is any suspicion of mental disturbance having determined the act, the procurator fiscal appoints two independent, well qualified psychiatrists to report on the mental state of the accused person, and every facility is given them. The records submitted are unbiassed, and when it can be satisfactorily proved that the accused is of unsound mind, or so defective in intelligence as to be unable to conform socially, then no jury is likely to convict. The fee for such examination and report is the statutory one of two guineas.

East recently stated that in England, 2,000 accused persons were annually remanded for an examination of their mental state. He also reported that of 296 prisoners charged with various offenses during the years 1900 to 1924, and found to be insane at quarter sessions or assizes, 147 were found insane on arraignment, and 149 guilty but insane. During the years 1901 to 1922 inclusive, of 1,445 tried for murder, 585 were convicted, 375 were acquitted, 134 were found insane on arraignment, 351 were found guilty but insane, and 32 were certified as being insane before trial.

At Broadmoor, of 444 cases sent to the asylum, of which the offense was murder, 109 had been found insane on arraignment, 286 were acquitted on the ground of insanity, 29 had been reprieved on the same ground, and in 20 cases sentence had been commuted to penal servitude, and afterwards they had been found insane. These figures are sufficient to indicate that justice is not administered in an arbitrary way, but that wherever there is any indication of mental disorder being present, justice becomes tempered with mercy.

In 1896 the Report of the Criminal Responsibility Committee of the Medico-Psychological Association showed that out of a series of 208 murder charges, sentence of death was passed in 55; 51 were found to be insane; 40 not guilty; manslaughter or some crime less than murder, 63. The committee reports that justice was ade-

quately done. When the plea of insanity is not successful, they said, it is far more often due to the weakness of the case than to a narrow interpretation of the law.

In Scotland, perhaps more than in England, when it can be conclusively proved that a prisoner is mentally ill, a jury is not impanelled, but the judge, on the medical evidence submitted, orders that the prisoner should be detained in a suitable place during His Majesty's pleasure. There is thus little chance of a person so suffering having to undergo the ordeal of an ordinary trial.

The system in vogue in Great Britain, therefore, is closely analogous to—though not so comprehensive as—the so-called Briggs Law in Massachusetts, which provides for the psychiatric examination of all serious or habitual offenders. That this is a satisfactory plan has been amply proved. That it may be extended is devoutly hoped.

If the plea of insanity was reserved for bona fide cases, or for cases in which there was serious doubt, then there would be little difficulty, as the M'Naghten rules are interpreted today in a most liberal spirit. It is not a question of whether the accused is suffering from a state of "partial" or "total" insanity, but if it can be proved even in a broad sense that the accused is mentally disordered, then no jury will convict. The question of responsibility is a secondary consideration. If it is proved that the accused is of unsound mind, the common-sense opinion of the common man takes the position that the accused cannot be responsible. Apart altogether from any structural change in the law, a broader, more sympathetic and understanding viewpoint exists. I do not believe that judge or jury consider responsibility in a technical, pedantic way, but they take into consideration all the circumstances and weigh the facts as an individual problem in each case.

There is a great deal to be said in favor of Carlos McDonald's view that insanity and irresponsibility are so closely allied as to be convertible terms. Those who discuss the matter of responsibility constantly refer to the fact that in our mental hospitals we have to control and discipline our patients by the granting or withdrawal of privileges, and therefore they argue there must be a degree of responsibility which does not entirely absolve them. It is true that most of our patients up to a point, have an abstract knowledge of

right and wrong, but no mentally ill patient is, on occasion, able to control his behavior so far as to apply correctly his abstract knowledge. The fact that we control our mental hospitals with the help of privileges is merely the treatment meted out to a child who is wilful—in this regard Hale's analogy to a child of 14 years is not out of place.

The difficulty starts when the plea of insanity in bar of trial or sentence is raised in cases where no redeeming feature is present. In such cases the plea of insanity is a last line of defense, a prayer and misericordia rather than an argument. That the plea is often used in such a way cannot be gainsaid. Doctors and lawyers seem to be about equally responsible—doctors because their common sense becomes dominated by their sympathies and theories, lawyers because they believe it is their duty to make something out of any case no matter how black it appears. It is under these circumstances that an astute advocate searches the prisoner's record for anything in the way of eccentricities, or personal character traits, which by means of mild suggestion can be exaggerated to the limit of abnormality. It is in such cases likewise that if the prisoner's personal record does not offer anything in the way of value, then those of his forebears and relatives are brought into the limelight, and if someone related to him has been alienated this is sufficient excuse to drag in the importance of heredity as a probable etiological factor. There is not sufficient realization of the fact that the laws governing hereditary transmission are still unknown. It was in reference to this matter that Bucknill, in describing the case of Guiteau, the assassin of Garfield, stated, "If it had been clearly shown that both of the man's parents, and all of his four grandparents, and all his uncles and aunts, had been unquestionably insane, it would afford no proof whatever that the man himself had been insane." That, of course, is a gross exaggeration but it illustrates the point at issue. A case occurred not long ago when a young male nurse in a mental hospital was charged with the murder of a female nurse under distressing circumstances. The prisoner had been in steady employment to the time of the commitment of the crime. No evidence could be advanced by those who had been associated with him pointing in any way to mental disorder, but at the time of trial the plea of sadism (of which there was no evidence)

was introduced, and, in addition, a strong attempt was made by his counsel to drag in the importance of insanity having occurred in a paternal cousin. The relationship was so remote that it could have no significance, but the mere fact that this had been mentioned and emphasized tended to create just that element of doubt sufficient to complicate the issue, and prevent full justice from being done. In the above case the prisoner's mental condition had never been called in question until the crime had been committed.

It is rare to see true cases of mental disorder where a crime has been the first evidence of it. In practically every bona fide case there is a history pointing definitely to mental disturbance over a considerable period of time previous to the criminal act. This is true not only of the better recognized forms of mental disorder, but it is equally true of crimes effected by those who are mentally defective or epileptic.

In recent years, the question of making some sort of legal provision for major crimes committed by psychoneurotics has come to the fore. Such cases occur, but in comparison with the other groups mentioned they are infrequent. When a psychoneurotic commits a capital crime there is almost invariably a history of instability and medical treatment extending over a period of years. It is impossible to conceive, under such circumstances, that any judge or jury at the present day would convict or would impose the maximum sentence. Sheldon Glueck believes that in these cases it would be wise to provide for a verdict of partial responsibility "in those jurisdictions which retain the death penalty." "Such frankly compromise verdicts," he says, "are necessary for all cases in which though sufficient evidence has been adduced to establish some condition of mental disorder, still the jury has found that the proof falls short of satisfying the requirements of the tests of irresponsibility." (*Mental Hygiene*: July, 1928.) This I do not agree with. If we establish proof of mental disorder, irrespective of degree, the legal or irresponsibility test will automatically not function. In the case of the psychoneurotic with the type of history outlined, at the time a homicidal crime is committed the borderline has been passed, and there should be little difficulty in deciding that the person was of unsound mind at the time the crime was committed. If mental disorder cannot be conclusively proved, if the medical wit-



nesses have widely divergent views, it is more satisfactory to eliminate the medical evidence entirely, and to allow the case to go to trial, and be decided on its merit with emphatic rehearsal of any extenuating circumstances which may be present.

Closely in line with such cases has been the attempt to legalize the doctrine of uncontrollable or irresistible impulse. Lord Justice Atkins' Committee (November, 1923) reaffirmed the M'Naghten rules, but in addition recommended: "It shall be recognized that a person charged criminally with an offense is irresponsible for his act when the act is committed under an impulse which the person was by mental disease in substance deprived of any power to resist."

Lord Justice Darling in 1924 in the House of Lords moved the second reading of the Criminal Responsibility (Trials) Bill, proposing to add a clause bringing in the plea of irresistible impulse, but it was opposed so strongly that it was withdrawn. I think this has been fortunate, because the difficulty of distinguishing between uncontrollable impulse and the impulse which is not controlled would make too fertile a dialectic field. Furthermore, it is not sufficiently realized that it is these cases with a narrow margin of self-control who show criminal conduct, who should be treated over a much longer period of time than apparently more serious cases. The danger of repetition in the former group is ever so much greater.

Not long ago I was asked to examine a man, 41 years old, who had been guilty of a most serious and dangerous assault. This man had had a list of 37 convictions since 1915. At the time of his trial in May, 1927, he was considered to be of unsound mind and unfit to plead. The usual order for his detention and treatment in a suitable place was issued. Recently an attempt was made to hasten or effect his discharge, as no gross mental symptoms were now in evidence. A review of his history showed that he was a man who throughout his life had been unstable; he was facile and suggestible, suffered from a suspicious, irritable disposition, and on the basis of delusional ideas had frequently found himself in conflict with the law. He was still, undoubtedly, a source of danger to himself and the lieges. It is in this type of case that the period of sentence and treatment should be of an indeterminate character. Such a case

would fall into the category of those provided for under the Baumes Commission report to the effect that after four convictions the sentence or treatment should be for the duration of the individual's life. It does not seem to me that this is quite the way to look on the matter and why four convictions should be necessary to determine whether a case is subject to reformation or not I do not understand. If the individual has been efficiently examined, mentally and physically, at the time of the first conviction, adequate information should have been obtained to allow a satisfactory diagnosis so that the treatment would be made effective from the beginning. The Baumes plan, and the plan proposed by the Ferri Commission of granting degrees of punishment and dangerousness tend to continue the mechanical administration of the law which we want so much to improve upon.

When we come to consider the whole matter, it seems to me that the difference of opinion between doctors and lawyers has not been because one side thinks so much of the criminal and the other so much about the crime, but it has been essentially due to the use of terms such as "partial", "total", "responsibility", "nature and quality", and such like, which have been impossible to define accurately and which have been used both by doctors and lawyers in a totally illogical and often contradictory way.

Various attempts have been made to modify in some way or other the M'Naghten rules, but I do not believe that any better criterion has ever been formulated, provided these rules are interpreted in a broad and liberal spirit, as is mostly the case today. It may be that an occasional case will arise presenting exceptional difficulty, but odd cases of such a kind are not sufficient to allow one to recast the law, and in any case I doubt whether any serious hardship has been inflicted.

The scheme recently formulated in the United States to differentiate treatment or sentence from the guilt-finding phase, and the placing of the former in the hands of a group of experts, is of extreme interest. The two questions which have to be answered are: (1) Is such a scheme workable? (2) Would the public be any better satisfied with it? In a matter of this sort it is essential that the public should be in full accord, otherwise such a scheme is likely to cause more difficulty than it is worth. It is not easy to get any

body of experts to agree among themselves, and whether a group of psychologists, sociologists, penologists and psychiatrists pulling together would form a happy crew is difficult to say. It may be surmised that sometimes the differences of opinion would be so great as to be irreconcilable. Under these circumstances what could be done? Would the matter be remitted to the judge, or would another group of experts find the solution? These, I think, are real difficulties, and no doubt will be very carefully considered before any actual drastic change takes place.

The present position as it appears to me is as follows:

The judge and jury system has well stood the test of time, and agitation for a structural modification of criminal law procedure is entirely inadvisable. As Lord Russell of Killowen once vitally phrased it: "Juries may sometimes act illogically, but they very seldom do what is really wrong." On the other hand, everyone recognizes the limitations of legal or penal methods, and the necessity for greater research into the factors productive of crime and their treatment. This is work for the psychiatrist, but before the psychiatric viewpoint is likely to be accepted there must be far more unanimity of opinion among the medical profession, and a better standard of knowledge among the psychiatrists themselves regarding the problems involved. The plan of drawing up lists of psychiatrists qualified to give medical testimony would merely make invidious distinctions. The solution really depends on more accurate knowledge, and a higher moral outlook. The principal emphasis should be placed on education and prevention before the individual gets into the hands of the law, and on the better supervision, control and treatment of the individual while he is under detention. There is still far too great a tendency to judge a person's mentality by his intellectual standard, and too little appreciation of the importance of emotional and moral changes which mean so much for correct social adaptation. In the United States a splendid start has been made. The development of your child guidance clinics, your juvenile court system, the plan of grading and studying prisoners which has been established at Sing Sing, the appointment of a psychiatrist as commissioner of correction, will help tremendously in elucidating the biological and sociological causes of criminality, and this in turn will lead to better treatment. Just as in dealing with mental dis-

orders our criterion for discharge depends essentially on the capacity for social adaptation, and the degree of insight and appreciation, a like standard should be demanded for the criminal. In mental disorders we can often tell whether a patient is likely to recover or not, but, as a rule, we have little idea regarding time duration, and it is because of this that in dealing with the criminal I would strongly favor the plan of colonization and an indeterminate sentence, depending on the individual's ability for social readjustment. While mental disorder and criminality are closely related, yet the terms are by no means interchangeable, and the two conditions can never be satisfactorily treated either in the same environment or by the same methods. There is no harm in being sympathetic, but at the same time we must face the hard facts and not attempt the impossible. As Sir Matthew Hale has said, "When I am invited to pity the criminal, I reflect also that there is a duty to my country."

## PSYCHIATRY AND THE MEDICAL STUDENT\*

BY C. MACFIE CAMPBELL, M. D.,

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Over thirty years ago T. S. Clouston heralded the dawn of a new era in psychiatry in Great Britain as the result of making psychiatry a compulsory subject of study for all medical students. In the preface to the fifth edition of his widely read *Clinical Lectures on Mental Diseases* he claims that every intelligent student will be more or less interested in the subject; "No subject in his course will keep the average student so mentally alert as a good clinical lecture on mental diseases, well illustrated by patients." Notwithstanding this statement the medical faculty is not yet prepared to use the student's interest in psychiatry as an intelligence test, and the alertness of the average student at the clinical demonstrations may have been due less to intellectual curiosity than to interest in the bizarre and the dramatic. Mental disorders have always been of interest even to the layman. Evelyn notes in his diary (April 21, 1657) that on returning from dinner with Lord Hatton "I stepped into Bedlam;" Pepys in his diary mentions (February 21, 1668) that "the young people went to Bedlam". There was no cinema for the young people in those days. Many a medical graduate of thirty years' standing admits that his alertness as a medical student at clinical demonstrations of mental diseases was as free from intellectual complication as his alertness at the cinema today.

Notwithstanding the interest and the alert response emphasized by Clouston, the number of medical students willing to embark on psychiatry as a career was comparatively small; even today the same hesitation to adopt this career is seen although the situation has materially changed since Clouston wrote these words. At that time in Great Britain and in America no university psychiatric clinic existed while in Germany numerous universities had followed the lead of Heidelberg which established the first university psychiatric clinic in 1878. In the English-speaking countries the student who chose psychiatry as his field of work, looking into the future saw himself as a hospital superintendent or perhaps as a consultant in private practice. In the former case his zeal for

\*Presented at the Dedication of the Psychiatric Institute and Hospital, New York, December 4, 1929.



intensive clinical work and for scientific investigation was likely to be cramped by heavy administrative duties and in the latter case by the varied requirements of private work. The whole emphasis of psychiatry was on patients who were either within the walls of mental hospitals or who were potential candidates for admission to the same. In Clouston's course for medical students the only personal contact which the student had with an individual patient was in order that he might learn to write out a certificate of insanity. The student who measured success by the world's coarse thumb and finger saw in the psychiatric career less pleasant conditions of life, less prestige and a more modest income than went with success in other fields. If the career, weighed with these popular measures, did not appear to the average student to be particularly dazzling, the work in itself seemed also to have certain drawbacks. In other specialties the relation between physician and patient seemed more pleasing; the patient came spontaneously seeking relief, cooperated with the physician, was grateful for his recovery, might even make his ailment and his benefactor a subject of table conversation. The student saw a somewhat different situation in the field of mental disorders as illustrated by the patients in the mental hospitals. The physician was thrust on the patient, the patient might not cooperate but remain icily aloof or even hostile. The charm of the professional relationship did not exist. The recovered patient preferred to ignore his past disorder and did not make the skill of his psychiatrist a frequent subject of table talk. The medical student has always been a practical fellow; fundamentally he is and always was chiefly interested in what he can do for patients, although nowadays he may have to conceal this and to claim that his only interest in life is in research. Surgery with its rapid and obvious results makes a unique appeal; medicine with its increasingly accurate technique of examination and greater therapeutic precision demonstrates definite results in a comparatively brief time; in psychiatry quick and dramatic results are also obtained, but as a rule treatment is prolonged; instruments of precision play only a subsidiary role. The whole evolution of the case may have to be expressed in terms which, to the scientific internist, may seem a curious blend of the commonplace and the metaphysical. The student felt somewhat discouraged by the apparent lack of treatment in psychiatry; even

today the medical student may get from a distinguished internist the impression that in the psychiatric field treatment is more or less futile and that the course of the individual disorder is a matter of predestination.

Another fundamental difficulty confronting the medical student was the absence of satisfaction to his intellectual curiosity from the subject matter of this specialty. He found in his textbooks on psychiatry a descriptive account of many conditions and a complicated classification which somewhat reminded him of dermatology. In other fields of medicine the workers with the aid of the experimental method were resolving the symptoms of disease into the underlying biochemical, physiological and immunological factors. In psychiatry the experimental method had narrow limits and a plunge into histopathological or bacteriological research still left a wide chasm to be bridged over between the results of such research and the clinical evolution of the disorder.

Other factors may have influenced the student as he thought over the choice of his professional work. He may have had some vague inkling of the views which Professor Autenrieth of Tübingen had pronounced in the early half of the nineteenth century. The Tübingen professor in his lectures on mental disorders warned his hearers not to occupy themselves too long with the treatment of the insane lest one should oneself become insane or demented. The student may have had the same impression as that expressed recently by a distinguished medical educator, who suggested to his hearers that psychiatrists were queer fellows, eccentric personalities. The truth that the chosen topic of work is subtly determined by many personal factors may well be admitted; if psychiatry is the special means by which the individual physician works out his own salvation, then it may be claimed as socially the most valuable form of occupational therapy.

Certainly in the psychiatric field the medical student might see men who had entered from various directions and after various experiences in other branches of medicine. Thus it became the adopted field of a fellow interne who was rescued from gynecology by means of a septic infection during his internship. While the field of asylum psychiatry thus gave a generous welcome to those who applied for admission, it also furnished opportunity for the

exercise of the most varied talents, and the babies of New Zealand thrive on the formulae of an asylum superintendent whose live stock displays were the despair of rival breeders.

In 1929 the situation in psychiatry that confronts the medical student is very different from what it was thirty years ago, and this difference may not be adequately recognized either by the medical student or by leaders in the other branches of medicine, who are still under the influence of the older psychiatric tradition and whose idea of psychiatry is apt to be that of their own student days.

The vast majority of patients who are suffering from well marked mental disorders are still looked after in huge aggregations, and for a long time the rôle of hospital superintendent will make the same heavy demands on the individual physician as before. For the physician with administrative rather than clinical or investigative interests these important positions will supply ample scope for his talents; the community will continue to be indebted to those hospital superintendents who with great devotion carry on the noble traditions of Tuke and Connolly.

For those with more highly specialized clinical and research interests and those who are sensitive to the problems of public health and preventive medicine the situation has been transformed. On the one hand the field of psychiatry has broadened and its social significance has been emphasized. On the other hand the possibility of making a more dynamic analysis of mental disorders along various lines has been demonstrated. Psychiatry today embraces the topic of human maladjustments in general, insofar as they are studied not from the point of view of economics or ethics or physiology, but from the point of view of the complicated mechanisms of the individual personality. A discontented employee, a failure at school, a delinquent, an invalid suffering from headache or vomiting, may be psychiatric problems. They are psychiatric problems if, for their elucidation, one requires to make that same analysis of the personality of the individual as is made in the study of mental disorders. Psychiatry no longer finds its center of interest in the more severe cases where legal authority is invoked in order that the patient may be cared for. At the present day psychiatry finds its clinical problems not only in the wards of the mental hospitals and in out-patient psychiatric clinics but in the wards of general hos-

pitals, in the school, the factory, the office and the store. If health examinations are advisable at regular intervals for normal individuals and if such examinations are an important rôle of the general physician, then mental health examinations may come to be of equal importance and a psychiatrist may have as one of his main tasks the psychiatric review of normal people; for example, the examination of college students.

While the field of psychiatry has broadened, intensive work in the old familiar field is now possible along lines that were little emphasized thirty years ago. Clinical and investigative work can now be carried on under admirable conditions. If one wishes the proof, one need only look around. Elsewhere the material facilities may be more meagre but the spirit of which this building is the visible expression is now widely diffused. The student may here have ocular demonstration that psychiatry is decently housed, that he will not be geographically separated from his fellows, and that in the Psychiatric Institute and Hospital he will have facilities for work, which are comparable to those in the other medical disciplines. He may still be troubled by the tradition that in mental disorders treatment is of little importance. As a matter of fact, I do not think that he will find any support for this view from those who have the most intimate contact with the psychiatric field in its broader aspects. In psychiatry, as in medicine and in surgery, there are many phases of sickness where the chief problem is that of good nursing care under conditions which are favorable for the readjustment of the individual, and where, as in the healing of wounds and of fractures, the physician does little more than arrange the best conditions for the reparative processes of nature to go on unhampered. In psychiatry, as in medicine and in surgery, there are many conditions where a complete return to the previous level of efficiency of the individual is not possible; yet the physician and surgeon play an important rôle under similar conditions. The cardio-nephritic may never return to his previous efficiency; a diseased joint can not always be restored to its previous mobility. So in psychiatry a similar situation frequently exists, while the psychiatrist sees much to be done in order to salvage what can still be saved, and in order to restore the patient to as near his previous efficiency as the condition allows. Unfortunately in many psychia-

tric cases conditions of serious inefficiency are looked upon as the inevitable result of some vague disease process and therefore as unsuitable for treatment, when a different attitude and a sounder point of view might enable the physician to do a great deal for the patient. In medicine and in surgery one depends much upon nature's own process of repair or readjustment, and there are limits to the restoration of function. Nor do patients always reach out for the help which medicine or surgery could supply. So in psychiatry one nurses the patient through the trying period, one tries to salvage all that can be saved from a serious disaster and one sees with regret that many individuals fail to utilize and may even violently reject the help which the psychiatrist could bring them. In medicine the physician wishes to supply the deficiency of any factors essential to the economy such as vitamins, thyroxin, etc.; he wishes to increase the immunity of the individual against external detrimental agents, he wishes to eliminate from the environment factors which are detrimental to the health of the individual. So in psychiatry one deals with patients who are suffering from mental privation of certain types, from absence of spiritual vitamins: in psychiatry there are patients who have been sensitized to certain issues of life and who require to be desensitized, there are environmental situations which bear hardly upon individuals of little resistance and which are open to modification. The general principles of work in psychiatry are not very different from those in medicine in general. To carry out the psychiatric procedure may be more difficult or more tedious, to desensitize a patient and make him more resistant to social factors is a more complicated process than an anti-typhoid inoculation or vaccination against smallpox. To open an abscess is as a rule less complicated and time-consuming than to give a patient the necessary conditions for the release of pent-up and pathogenic emotions. It is easier to demonstrate to the student specific orthopedic exercises than it is to demonstrate an ortho-psychic procedure. The psychiatrist has no personal reason to feel that his life is not one of active therapy as he supervises the care and treatment of the more severe psychoses, as he reviews with a convalescent patient the conditions of the illness and the assets available for the prevention of a future attack, as he takes up with individual patients the accurate analysis of their morbid depres-



sions and fears and twisted attitudes, as he deals with conditions of acute emotional turmoil and with physical invalidism covering hidden complexes, as he deals with the problems of the behavior, the special attitudes, and the varied nervous episodes in the life of the child. The psychiatrist may at times be uncritical, he may take credit to himself for what is due to providence, but he has in many cases reason to think that his direct therapeutic intervention has been of striking benefit to the individual patient. To attempt a nice measurement of the comparative value of the therapeutic results in the different specialties may be left to others.

Psychiatry can at the present moment offer to the student a career which offers the ordinary inducements in the way of the various amenities of life, and it guarantees to him a broad and interesting field of work and admirable facilities for carrying on this work. The enterprising student may wonder whether psychiatry offers a suitable field for the exercise of his intellectual curiosity. He may be uncertain whether psychiatry has passed beyond the descriptive and classificatory level and whether there are at present problems sufficiently clearly formulated to be attacked in a profitable way. At the present moment psychiatry offers a rather unusual field for research; it may perhaps make more appeal to the enterprising pioneer than to the one who likes to work in fields which have been carefully surveyed and cleared and where the preliminary work of others has made it possible to choose some limited plot in which one can carry out certain detailed investigations. The problems in psychiatry range from those dealing with the autonomic-endocrine system and with the details of brain structure to problems dealing with the thought processes and with the mode in which man builds up his individual life experience. To resolve the problems that come up in the study of mental disorders one needs to know something about the stages through which man has passed in his long evolution and in his individual development from infancy to adult life. There is plenty of room for the satisfaction of the intellectual curiosity of the student in the study of genetic psychology and of the presence in the adult of childhood and primitive elements, in the study of conditioned reflexes and of the way in which the behavior of the adult is subtly conditioned by the earlier experiences of life, in the intensive analysis of the emotions with their compli-

cated integration of many bodily processes, in the study of fundamental problems of biochemical and physiological nature.

Psychiatry may therefore feel that she is worth being courted and may even take the initiative in coyly displaying her charms. She does not wish, however, to exercise her fascination in an indiscriminate way and she makes serious demands on those who would pay court to her. Psychiatry demands from the medical student a special interest in the problems of human nature and in the complex values of the social environment. Such interest in the problems of human nature may well have shown itself in previous systematic study of psychology, so that the student comes to the study of the abnormal behavior and attitudes of his patients with some knowledge of the organization of the mental life in general, knowing something of the instincts, the emotions, the rôle of imagination and the nature of the intellectual processes, and has some idea of such factors as repression, dissociation and symbolism. Medicine demands some knowledge of biology and of biochemistry before admitting the student to the medical school and prepares him for admission to the wards by a rigid discipline in physiology. The medical student who takes up his clinical work in internal medicine is familiar with the chemical and nervous integration of the system and with the delicate regulation of the various systems of the body. In the wards he studies the same systems, only working under somewhat different conditions from those in the laboratory of physiology or pharmacology. Psychiatry, on the other hand, is expected to admit the student to the psychiatric ward although in his college course he may have had no course in psychology, and in his pre-clinical medical course have had nothing but the most meagre introduction to the field. Thus in the most complex field of human mal-adjustment the medical student takes up his study of the phenomena with a minimum of preparation. As the medical school as a rule has made no adequate provision for a satisfactory introduction into psychiatry, the student has as best he can to make up for this gap in his training.

Progress means united endeavor in various directions and involves cooperation. At the present moment one sees progress in the emphasis which the medical school is laying upon psychiatry and upon the training of physicians to meet the essential psychiatric

needs of the community; one sees progress in the facilities for carrying on psychiatric work such as is illustrated by the admirable hospital in which this meeting is held. There is no doubt that with these facilities and the removal of the old restrictions the student will have an attitude towards the problems of mental disorder which those of previous generations seldom had. He will be not only interested and alert, but putting aside the bizarre and dramatic he will have the same intellectual curiosity as to the underlying mechanisms of these serious disorders, as he has in face of the disorders which he meets in his medical and surgical clinics. He may not feel either adapted for or specially interested in psychiatry but in his general work as a physician he will see mental disorders in their proper perspective and he will shed any residuals of a mediaeval attitude with which he may have come to the medical school. The great contribution to be made by the medical school and the hospital in such an enterprise as this is not necessarily to turn out a great number of psychiatrists, but to see that every physician who passes through the institution will deal with the troubles of human nature in no negligent or trifling way, but will take them up as an essential part of his professional duties; he will then more fully than at present treat his patient, for while not less interested than before in the disease of the patient, he will be more interested in the patient himself and in his handicap, and he will know better how to help men, women and children, who have difficulty in meeting their special life situations.

## THE SIGNIFICANCE OF NATURAL SCIENCE FOR PSYCHIATRY\*

BY PROFESSOR WALTHER SPIELMEYER  
UNIVERSITY OF MUNICH

I have the high honor to convey to this new Institute for Psychiatry the greetings and good wishes of the German Institute of Research for Psychiatry in Munich. I bring the heartfelt wishes especially to its director—to you, my dear Dr. Kirby.

Difficult as it is to express our emotions, by inadequate coin of words, it becomes for a foreigner an absolute impossibility to reveal in another and strange tongue the feelings which such an occasion arouses in him. Let me, I beg you, mention only one of the causes which in this place and in this moment most deeply stirs me; namely, I stand before you as the representative of a similar German institute, which for its very existence and progress is indebted to American aid, to the help of the Rockefeller Foundation.

What here we see realized is the American method of devoting fortune after fortune to the highest and noblest aims and endeavors of mankind. Moreover, we admire the zealous care with which the municipalities and the state, the founders and the boards investigate the appeals addressed to them, in order to determine if the projects merit financial aid.

So here, we must ask ourselves first why psychiatric research has of late years received such generous grants, and secondly, whether our methods for healing the sick-in-mind have a prospect of success.

The first question is easily answered. The increase in the already large number of insane, both in and out-patients of our hospitals, the stupendous public expenses incurred, and above all, the horror which stirs every man's pity, have led to liberal donations for research.

The second question is harder to answer. Are the methods applied in these research institutes likely to lead to improvement in the treatment of mental disease?

In these research institutes for psychiatry we should find both

\*Presented at the Dedication of the Psychiatric Institute and Hospital, New York, December 4, 1929.

wards and laboratories of various kinds. So, in addition to the observations at the bedside, all kinds of auxiliary branches of psychiatric science should be included and practiced. From the application of these various kinds of natural science we promise ourselves advance in psychiatric treatment. It is on *the importance of natural science for psychiatry* that I wish to speak in this address.

Anatomy is the ultimate authority. Established anatomical facts we have to accept, be they in harmony or disharmony with our clinical statements. Observations and opinions must yield to their weight. In all branches of medicine the anatomical fact is the sure foundation for clinical research and doctrine. But in psychiatry we are only just in the beginnings. It is but a quarter of a century ago that we learned to distinguish the first of these diseases, namely general paralysis, in its anatomical substratum. And up to now, we have only been able to discover the relatively coarse and elemental processes, particularly the idiocies, some types of dementia and various kinds of circulatory disturbances. But without stop or stay we pursue histopathological researches, and if our progress seems to slacken, it is owing to the difficulty of the matter. But we may hope, that with the perfection of our means of investigation and greater experience we shall win a deep insight into the nature of these diseases. But I must stress that it is only a group of diseases and a group of symptoms for which we can hope to find an anatomical explanation.

In the anatomical department the pathological transformations of brain tissues may be found out. By means of special staining methods it is possible to distinguish the finer deflections from the normal of the nervous system. Special constituents of the nerve tissues, as the nerve cells and fibres, are rendered visible in an isolated, elective manner; in this way the enormously complicated mass of the entire tissue may be analyzed. By consideration of all the single constituents we distinguish the general nature of the brain alteration. This may correspond to some psychoses. Moreover, we seek the key to certain symptoms by the localization of lesions in certain parts of the brain.

Thus you will see that an explanation of the nature of insanity should be sought by the study of *bodily* principles. In similar fashion this result may be obtained by research on *metabolism* and



also by examination of *chemical* changes of the brain. Here American research leads the way. Many serious forms of insanity are accompanied by disturbances of metabolism and in other cases these disturbances play an important part in their etiology. Diseases which are of peculiar interest to the physiological analyst are epilepsy, general paralysis, alcoholism and schizophrenia. Closely connected with chemical experiments are researches in endocrinology, which today represent a part of the investigation of constitution and body structure.

Twenty years ago the Wassermann method for the diagnosis of syphilis was discovered and since that time a serological method of research has been employed in psychiatry. This discovery signifies for syphilitic brain and nerve diseases an immense advance not only in diagnosis, but also in therapeutics. Thus the first step on untrodden ways was taken, and this promising field of research has become ever more and more extensively useful for psychiatry.

Since serology above all things will find the etiologic relations, it is closely bound to microbiological investigations of pathogenic organisms. This special science in psychiatry works more experimentally than other groups and so its representatives experiment in the field of therapy.

Again other branches of research have been developed. Genealogy as a form of natural science is a development of recent times. The earlier enquiries regarding "hereditary taint" were of course altogether inadequate; only natural science and heredity research, founded on exact principles could lead us onward. Both American and German research workers are unanimous with respect to the significance of this movement; here as there, extensive investigations are going on. Two important lines must be followed: first, a study of the magnitude and nature of the degenerative process; and second to what extent the transmission of morbid tendencies on the one hand and damaged germs on the other, can influence posterity.

Finally, the psychological studies. Certainly *experimental* psychology on which they had set such great hopes for a penetrating comprehension of mental derangements has disappointed many, and they have adopted other psychological methods. Nevertheless, the experiments of Kræpelin on the influence of medical remedies and on the influence of exercise and fatigue still keep their value.

There is another part of psychology which has become a biological science; a criminal biology has developed out of criminal psychology; this is a matter in which psychiatry works together with jurisprudence and sociology.

I have mentioned thus briefly the most important branches of natural science which might be helpful to psychiatry.

Now, what can these auxiliary sciences effect in the service of psychiatry, what do we expect to gain from them? We are firmly convinced that an extension of our knowledge in the various branches of natural science is *indispensable* to the conception of the *essence* of mental diseases and therefore to the foundation of rational *treatment*.

Ten or twenty years ago such an opinion was perhaps not always shared by the layman, but it was evident to *physicians*. But nowadays we must defend this opinion even before *physicians*. For, not only in the psychiatric department of medicine but also in *general* medicine we are *warned* against an undue valuation of *laboratory science* for medicine. The warning is in part justified. But as it occurs again and again, the pendulum now swings too far to the other side. It is said "healing is an *art*, not a *science* and the nature of medicine lies in the subjective conception of life in opposition to exact natural science." We, too, are of the opinion that a doctor should make his inquiries with all his heart and soul. And particularly in psychiatry it is of the highest importance that the doctor should be able to participate in his patient's thoughts and feelings. Only so can he understand his patient as an individual amongst the inexhaustible abundance of diseased personalities. But that is only one side of research and indeed an extraordinarily subjective method. It is feared that the results of pure natural science for medicine are too highly rated, we must also question whether a too sympathetic treatment of the matter may not lead to excessively subjective judgments and theories. Therefore, one of the chief duties of psychiatric research institutes is to refer again and again to controlled observations and soberly weighed facts. The fundamentals of clinical and therapeutic endeavors must be guaranteed by the investigations of natural science. Only steady, patient and systematic research will lead to an effective struggle against mental disease. Intuition, imagina-

tion, chance, may lead to discoveries, but in general, and in the long run, only an intimate knowledge of the nature of the disease can be the sure basis for rational treatment. We must not suppose that research in natural science is but a simple enumeration of empirically obtained facts; on the contrary, knowledge does not come without intuition and the spark of genius. That is what Goethe means when he says:

"Mysterious, even at brightest noonday  
Thou canst not tear away the veil from nature  
And what she withholds from thy spirit  
Thou canst not wrest from her with screw and lever."\*

But it would be a wrong done to medical science and a misinterpretation of Goethe's meaning to fold one's hands, lay screw and lever aside and wait for the divine spark. For even *genius* cannot do without *labor*.

The law of ebb and flow repeats itself here in science. It is but a short time since psychiatry has become a branch of medicine. All too long was she hedged round by moralizing considerations and barren psychological speculations. Only in the 19th century the conception was medically summed up by the admission that diseases of the mind are diseases of the brain. Nowadays again it appears to many that this science of sick mentalities is really a kind of natural science. Also we who in research institutes strive for psychiatry can only be solved in a very small measure by the methods of natural science. Also we who in research institutes strive for psychiatric ends, admit that natural science is unable to solve every problem. But we recognize in these researches the surest fundamentals of knowledge, of discovery and therapy.

In their relation to clinical psychiatry natural sciences play the part of auxiliary sciences. Out of clinical research, that is to say, out of examination and observation of the sick arise the problems which can only be elucidated by systematic cooperative work. There is no one research worker able to operate simultaneously in anatomical, chemical and serologic branches. The isolated research worker must carry on his task, conscious of his one-sidedness. A

\*"Geheimnisvoll am lichten Tag  
Lässt sich Natur des Schleiers nicht berauben,  
Und was sie Deinem Geist nicht offenbaren mag,  
Das zwingst Du ihr nicht ab mit Hebeln und mit Schrauben."

common cooperation and a common aim should eliminate the danger of one-sidedness. The worker's duties are ordered in concentric circles and a system of research must be arranged so that every one in his place strives for the *common* aim. But all knowledge—as recognition of the real—forms a unity and, unsuspected, from the most abstract science a bright gleam may illuminate the whole. As W. von Humboldt once said: "Science often, when it appears most to withdraw from life, outpours its richest blessings on life."

I come to the end of these remarks in which I have striven to bring to light the significance of medical research for psychiatry by means of natural science, and to justify the work done in the laboratories of research institutes. They will and can bring us nearer to our high aim which is the perception of the nature of mental diseases, their prevention and cure.

Let me once more express my heartfelt good wishes to this new American Institute. May this institution ever be an abode of research from which may proceed a new era of psychiatric therapy. For of all suffering and torment of mankind mental diseases are the worst. That you, Dr. Kirby, and your staff may be richly instrumental in the alleviation and cure of such human misery is the best wish which I can offer to this New York Psychiatric Institute.

## PROGRESS IN TEACHING PSYCHIATRY\*

BY FRANKLIN G. EBAUGH, M. D.,

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I am going to try to follow a bit of advice given to George Arliss in his early days on the stage. It was this, "Whenever you have a speech to deliver that is particularly awful, always give it out as though you considered it the finest piece of literature that was ever written and the public will accept it."

With the formal opening of the New York Psychiatric Institute we all realize that we are now entering into a new era of psychiatry. An institute of this type with its unexcelled facilities for research and for the teaching of psychiatry, two decades ago would have represented a dream. Thanks to the consistent, sustained, pioneer efforts of Meyer, Hoch and the present director of this hospital, this dream has come true and is realized in this institution. The New York Psychiatric Institute, as an integral unit of the Columbia Medical Center Group housing the Department of Psychiatry of this Medical School, operating in close association with the adjoining Neurological Institute and other important units in the University, will stimulate further developments of psychiatry as an essential phase in medical education. The excellent observation facilities, including those for the study of children, usually lacking or sadly neglected in other institutions, will further this medical program as well as stimulate clinical researches of epoch-making importance.

As a representative of the University of Colorado Medical School it gives me great happiness to congratulate Dr. Kirby and the State of New York on the achievement and organization exemplified here, and our institution in Denver extends its felicitations on this occasion.

New York, particularly Columbia University, is a great teaching center for all phases of knowledge. In choosing a subject for my few remarks I have been impressed by the fact that there are few centers that have, even in this day, a well rounded course in psy-

\*Read at the Dedication of the New York State Psychiatric Institute and Hospital, December 4, 1929.



chiatry. The teaching of psychiatry in our country has been a slow but progressive development with foundations well laid. The psychobiological viewpoint of Adolf Meyer has made the studies of the nature of mental disorders productive and fascinating, and has offered new hope for the prevention and successful treatment of these diseases. We are very fortunate in having psychiatry presented to us as a living subject, with outstanding relations not only to general medicine but to the social problems of every-day life. We regard mental illness as the gradual accumulative results of unhealthy reactions of the individual to the demands of his environment. We trace in a given case all the factors that go to the production of these reactions. These factors can be summarized as somatogenic, neurogenic, exogenic, psychogenic and constitutional. This viewpoint has resulted in a departure from the old descriptive types of psychiatry to the present day genetic-dynamic concepts in which we study the total organism reacting to a total situation. We are in this sense "dealing with functions of the total person and not merely detachable parts". This viewpoint has enabled us to study difficulties of the total unified adjustment and behavior of our patient. In an approach to teaching psychiatry through the genetic-dynamic viewpoint, Meyer has insisted that the student should work out a personality study of a certain person, preferably himself or herself, with the purpose of obtaining a picture of the live human organism studied as a personality. Meyer aptly states that such a personality study is as important a procedure as the dissection of a cadaver and naturally an essential supplement of the ordinary training. Through this experience the student is prepared to extend the work with patients and is taught methods of examination of psychiatric cases. The student studies life facts and situations in his patients and is not drilled in schemes for classifications of mental disorders. This leads from interest in more or less fixed diagnoses to an interest in the understanding of the whole patient and his problem. The student follows genetic-dynamic considerations instead of attempting to classify and pigeon-hole his patient. He studies life situations and reactions and formulates interpretations which can be utilized to understand and modify the adaptation of the individual. The student singles out distinctive reaction patterns in his attempts to understand and group the essential demonstrable facts underlying a mental disorder.

The time has definitely come when psychiatry need no longer continue isolated or be regarded as the mysterious preserve of a few specialists, but when a fundamental knowledge of psychiatry should be within easy reach of the general practitioner in all its implications concerning the importance of early recognition, prevention and treatment. Physicians should realize that mental disease is always an individual affair and that characteristic symptoms and syndromes have little meaning apart from the setting in which they develop. This setting includes, of course, the individual's personality and history from his earliest days as well as the general mental and physical condition at the time. We want to understand the patient as an average, every-day, he, she, you or I individual as well as the problems he is reacting to which result in mental disorder.

The last decade has seen tremendous advances in the field of clinical and preventive psychiatry. Nowadays we hear of the development of social psychiatry, we read of industrial psychiatry and forensic psychiatry. Likewise, our literature has been crowded to the saturation point with developments under the head of extramural psychiatry and with developments in the field of child guidance and general mental hygiene. There is no doubt but that the developments reviewed under these headings have been extensive and useful but still we should be extremely conservative concerning their application to the problems of every-day life. It seems to me it is of greatest importance for us to be patient, cautious, thorough and intensive in our work, and keep as our main idea proper training of personnel to take up the various phases in our rapidly developing and expanding field. These developments in the final analysis depend on our progress in teaching psychiatry and on our ability to reach the young, splendidly trained medical school graduate and interne of the present day. There is no doubt that definite success of varying degrees will result with patient, conservative, sustained efforts in the educational fields of psychiatry from the preventive viewpoint. The changing attitude of the public in general regarding mental disorders is an excellent reward for these efforts. At the present time there appears to be a unanimity of opinion as to the importance of establishing adequate psychiatric teaching of medical students and post-graduate students. In order

to ascertain the present position of psychiatry in the curricula of our medical schools I have sent a brief questionnaire to a group of representative schools.

Statistical data were obtained showing the place taken by psychiatry and neurology in 1920 and in 1929-30. Twenty-two of our 66 Class A medical schools offering a 4-year course were studied. Of these 22, 15 showed an increase in the amount of required hours devoted to the teaching of psychiatry; 2, an increase in elective hours; 10, an increase in required hours of neurology, and 3, an increase for the elective hours of neurology. Only 2 schools showed a decrease in required hours and 1 school showed a decrease in elective hours. Six schools showed a decrease in required hours for neurology and 1 school showed a decrease in elective hours. For neurology there was no change in the required hours in 6 schools and no change in elective hours for 18 schools. The data obtained indicated that the total number of hours in these 22 schools devoted to the teaching of psychiatry in 1920 was 743, whereas this total had increased in 1929-30 to 1,195. The average number of hours per school devoted to psychiatry in 1920 was 34 and this had increased to 54 for the present year. The average number of hours devoted to the teaching of neurology in 1920 was 48 and in 1929-30 was 53. Six of the Class A schools studied did not devote any time to psychiatry in 1920 and 4 did not devote any to neurology, whereas, for the present year no schools were found in the 22 studied that did not give required or elective work. Other comparisons in the group of 22 schools studied were as follows:

SCHOOLS CLASSIFIED WITH REFERENCE TO REQUIRED COURSES IN NEUROLOGY AND  
PSYCHIATRY

	Neurology		Psychiatry	
	1920	1929-30	1920	1929-30
No required hours .....	4	1*	6	1*
10 to 50 required hours.....	9	11	11	11
51 to 100 required hours .....	6	7	4	7
101 to 200 required hours .....	3	3	1	3
	—	—	—	—
Total schools .....	22	22	22	22

The data for elective courses are summarized as follows in the group of 22 representative Class A schools studied:

\* Yale has no required course but gives an adequate elective course.

## SCHOOLS CLASSIFIED WITH REFERENCE TO ELECTIVE COURSES IN NEUROLOGY AND PSYCHIATRY

	Neurology		Psychiatry	
	1920	1929-30	1920	1929-30
No elective hours .....	18	14	20	16
10 to 25 elective hours .....	3	5	1	5
26 to 50 elective hours .....	1	2	1	0
75 to 100 elective hours .....	0	1*	0	1*
Total schools .....	22	22	22	22

\* Yale has no required course but gives an adequate elective course.

The use of hospital beds in connection with the teaching of psychiatry in these schools is summarized in the following table:

## SCHOOLS CLASSIFIED WITH REFERENCE TO AVAILABILITY AND USE OF HOSPITAL BEDS IN CONNECTION WITH THE TEACHING OF PSYCHIATRY

	1920	1929-30
None .....	6	3
Inadequate .....	1	1
Adequate—not utilized .....	4	2
Adequate—partly utilized .....	7	6
Adequate—well utilized .....	4	10
Total schools .....	22	22

(*Inadequate* indicates beds in a general hospital service without any other facilities or a very small number of psychiatric beds available. *Adequate and not utilized* indicates that there are sufficient psychiatric cases available for study but that no clinical clerkships or ward rounds were required of the students and the material is used only in clinical demonstrations and didactic teaching. *Adequate and utilized* indicates a sufficient number of beds available and a sufficient provision for clinical clerkships for ward work.)

The following table classifies the schools with reference to available out-patient facilities:

	1920	1929-30
None .....	10	4
Inadequate .....	2	2
Adequate—note utilized .....	1	0
Adequate—partly utilized .....	5	7
Adequate—well utilized .....	4	9
Total schools .....	22	22

(*Inadequate* indicates a lack of provision for special psychiatric out-patient clinics under circumstances in which some psychiatric clinical teaching is done as part of the general dispensary regime. *Adequate and not utilized* indicates that there is a good out-patient service in psychiatry available but training in psychiatric dispensaries is not provided for the students. *Adequate and utilized* indicates special psychiatric clinics available and provision for clinical teaching in these.)

The following table classifies the schools with reference to available child guidance teaching:

	1920	1929-30
None .....	16	8
Inadequate .....	4	7
Adequate .....	2	7
	—	—
Total schools .....	22	22

(*Inadequate* indicates that child guidance is taught entirely by didactic methods without clinical contact with the patients or that the clinical contacts are too limited to give the student a fair understanding of the problem.)

The following table classifies the schools with reference to available clinical clerkships and ward work in psychiatry:

	1920	1929-30
None .....	13	8
Inadequate .....	5	5
Adequate .....	4	9
	—	—
Total schools .....	22	22

(*Inadequate* indicates either too short a period of clinical clerkship or the limitation of the number of individual patients studied to such an extent that it would be impossible to cover adequately the important psychiatric reaction types.)

These tables indicate the general trend in the time devoted to the teaching of psychiatry. They do not give an accurate description of the situation. It is evident that courses in psychiatry which omit or give insufficient clerkships or ward contacts with individual psychiatric patients, or schools which make no provision or inadequate provision for courses in child guidance and mental hygiene are not meeting the demands for adequate teaching. Very few of the schools studied made adequate provision for a full course in all departments. Nevertheless, the entire situation is so much better than it was 10 years ago that it is very encouraging.

Of the 44 schools not studied in detail catalogs were available for 38. On the basis of the number of hours given in psychiatry and the type of didactic and clinical work offered, these institutions show for 1929-30 no provision for psychiatry in 2 schools, inadequate provision in 29 schools, and adequate provision in 9 schools. We question seriously a Class A standing for many of these schools on this basis. Courses were considered adequate in this estimation only when they provide a well rounded course in all divisions of psychiatry.



Just here let me quote from Alice in Wonderland on the subject of required hours:

"And how many hours a day did you do lessons?" said Alice "Ten hours the first day," said the Mock Turtle, "nine the next, and so on." "What a curious plan!" said Alice. "That's the reason they're called lessons," said the Gryphon, "because they lessen from day to day."

Now, to the contrary, hours in psychiatry need to be increased in most instances.

It is no doubt difficult for older, established institutions to break away from tradition and change the routine of teaching schedules, while a newer institution can more easily do so, especially where the facilities afford opportunities to do away with the older didactic teaching and put in its place individual case study and clerkships. Having the advantages of a new hospital operating in close association with an adjoining university general hospital and medical school, we have attempted to develop a teaching schedule in our small institution to meet the requirements for the under-graduate student as well as the graduate physician.

In the University of Colorado Medical School the teaching of psychiatry is patterned closely after that developed by Meyer; 54 hours are devoted to classroom discussion and demonstrations and 72 hours to clinical clerkships in the ward and out-patient clinics. During the second year the student spends 10 hours in a course in psychobiology. He studies the facts regarding his personality under these headings:

1. General personality survey.
2. Special analysis of the psychobiological assets.
3. Range and fluctuation of fitness with regard to work, play, rest and sleep.
4. Social relations and the relative role of self-dependence and social dependence.
5. Sex development.
6. The synthesis and balance of the personality.
7. Difficulties and handicaps.
8. Specific disappointments and reactions to them.

9. Assets and tendencies, favorable and detractive, traced to:
  - a. Heredity.
  - b. Developmental defects.
  - c. External influences.
10. An enumeration of the events, experiences and situations in life which constitute special dynamic complexes or determining tendencies, in the form of an index of the significant results of the personality study.

He studies the functions of definite personalities and follows through the issues of, "The problems of observation and of singling out the salient objective facts, the problems of formulating these objective facts in a dependable and helpful record, and the determination of the best means of bringing the inferences to an objective test." This course is followed up in the third year when the student spends 44 hours in class work and discussions of the various reaction sets beginning with the anergastic or organic reaction sets, dysergastic or delirious reactions, thymergastic, paraergastic reactions and ending with the merergastic disorders or psychoneuroses. Following this approach we find that the student becomes more interested in studying the facts presented by the patient than in classifying the patient under some definite disease heading. In addition, the student, during the third year spends 3 hours per week for 6 weeks in small sections. Here cases are studied in detail, case reports prepared and demonstrations given by the teaching staff. During the fourth year the student acts as a clinical clerk and is assigned in rotation all the admissions to the psychopathic hospital. He spends on an average of 2 hours per day in the psychopathic hospital for 6 weeks. It is estimated that before graduation each student works up individually at least 50 cases. Many students have reported that they have worked up approximately double this number. Psychiatry is not presented to the student to prepare him to enter the specialty of psychiatry but to enable him to realize psychiatric problems in all the fields of medical endeavor.

Although we have a few post-graduate students taking our summer course each year, our post-graduate work consists almost exclusively of the training of men who have completed their internships and have been granted a two-year Commonwealth Fund Fellowship for training in psychiatry. These men are carefully chosen and

personal interviews are held before they are appointed to a Fellowship. The Fellowship training program consists of the following: First, ward, out-patient and extramural work; and second, studies and examinations of fundamental psychiatric literature as well as current literature. In the definite ward work assigned, the Fellow studies each patient under the supervision of a senior psychiatrist, prepares case reports which are presented in the regular staff rounds and conferences. Here he has the best approach to psychiatry in that he assumes active ward responsibility for all patients assigned to him. He is also assigned work in the out-patient clinic, especially in the child guidance and community clinics.

As a second part of the Fellowship training program, monthly written examinations are conducted. These examinations are based on a review of the psychiatric literature based chiefly on current studies as well as a review of many of the text books of psychiatry, for instance, that of our distinguished guest here today, Dr. Bleuler. The Fellow is not assigned any reading, and examinations are not conducted, until the first 6 months of training has elapsed. During this time he is expected to be well oriented as to methods of procedure and work and progress can be made at regular intervals regarding a review of psychiatry. During his period of training the Fellow is given opportunity to take part in the educational program for the community and is especially encouraged to give talks at the conferences with relatives which are conducted at regular intervals in the hospital. Following the conclusion of the second year of training each Fellow is advised to continue in connection with some teaching institution, taking up special clinical problems in accordance with his drive, capacity and interest.

In connection with the training of these men we are hoping that standards leading to a degree in neuropsychiatry will be established whereby they can be given formal recognition for the work completed following oral and written examinations. The fact that at the present time a committee has been appointed by the American Psychiatric Association to establish these standards is very encouraging in furthering our program in teaching psychiatry.

In conclusion I wish again to congratulate Dr. Kirby upon having enticed such distinguished guests from foreign shores to visit us and to wish him and his staff continued high attainment.

## CYTOARCHITECTONY AND PROGRESSIVE CEREBRATION\*

BY PROFESSOR CONSTANTIN VON ECONOMO,

UNIVERSITY OF VIENNA

The hope to gain more knowledge of normal and pathological psychic activity by the precise study of the cerebral structure, and perhaps the secret desire to approach the most important and the most supreme problem, that of human intelligence, by the organic road, have attracted many a scientist since the days of Vicq d'Azyr, Meynert and Betz, to the study of the fine and complex architecture of the cortex. I have dedicated twenty years to this study and will try to give you now a short survey of its most immediate particularities.

The gray matter of the cortex consists of a great number of cells; I estimate them to be about fourteen thousand millions, mixed up with myelinated and unmyelinated fibers placed in a net work of nervous fibrils supported by neuroglia and perivascular sheaths of mesodermic origin. Time does not allow me to describe all the elements of the cortex. I will confine myself only to the study of the cellular structure or the cytoarchitectony of human brain which is the most important and the best known, for it has been studied by Campbell, Elliot, Smith, Brodman, and myself for several years.

The cortex has three principal kinds of cells which are named after their appearance: pyramidal, fusiform, and small granular. They are not scattered at random in the cortex, but they are formed in six layers super-imposed upon each other.

The layers, excepting the first one, are named after the cells they contain. They are from above downwards: (See Fig. 1).

- I. Molecular,
- II. External granular,
- III. Pyramidal,
- IV. Internal granular,
- V. Internal pyramidal or ganglionic,
- VI. Fusiform.

We find these six layers of cells throughout the whole cortex with the exception of a well-defined small portion in the rhinencephalon which has a structure altogether different from the rest of the

\*Presented at the Dedication of the Psychiatric Institute and Hospital, New York, December 4, 1929.

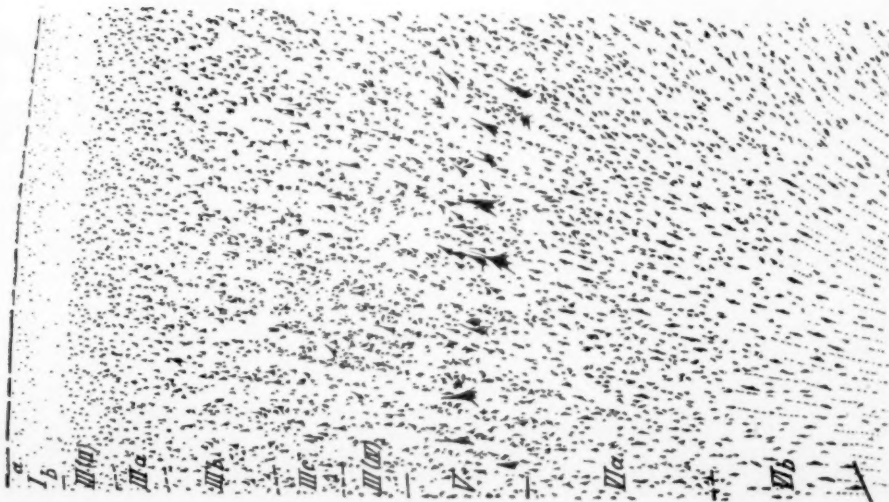


Fig. 3—The motor area FA on the pre-central gyrus with its giant cells.

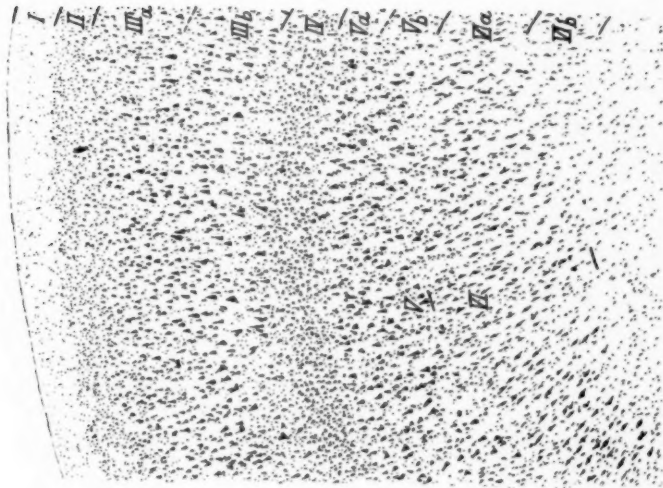


Fig. 2—Section of frontal cortex showing the six cell-layers (area FG).

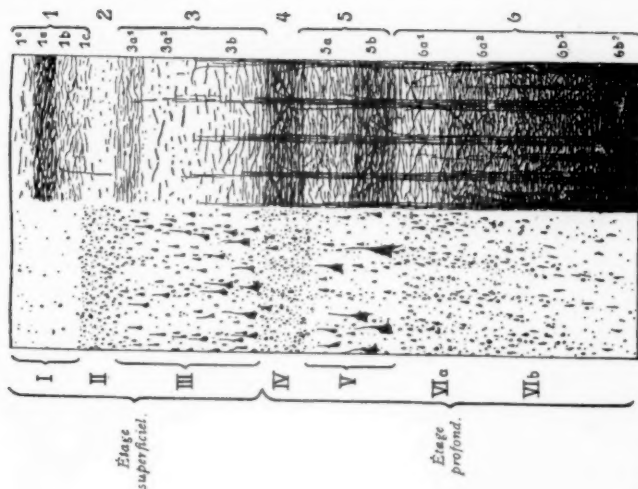
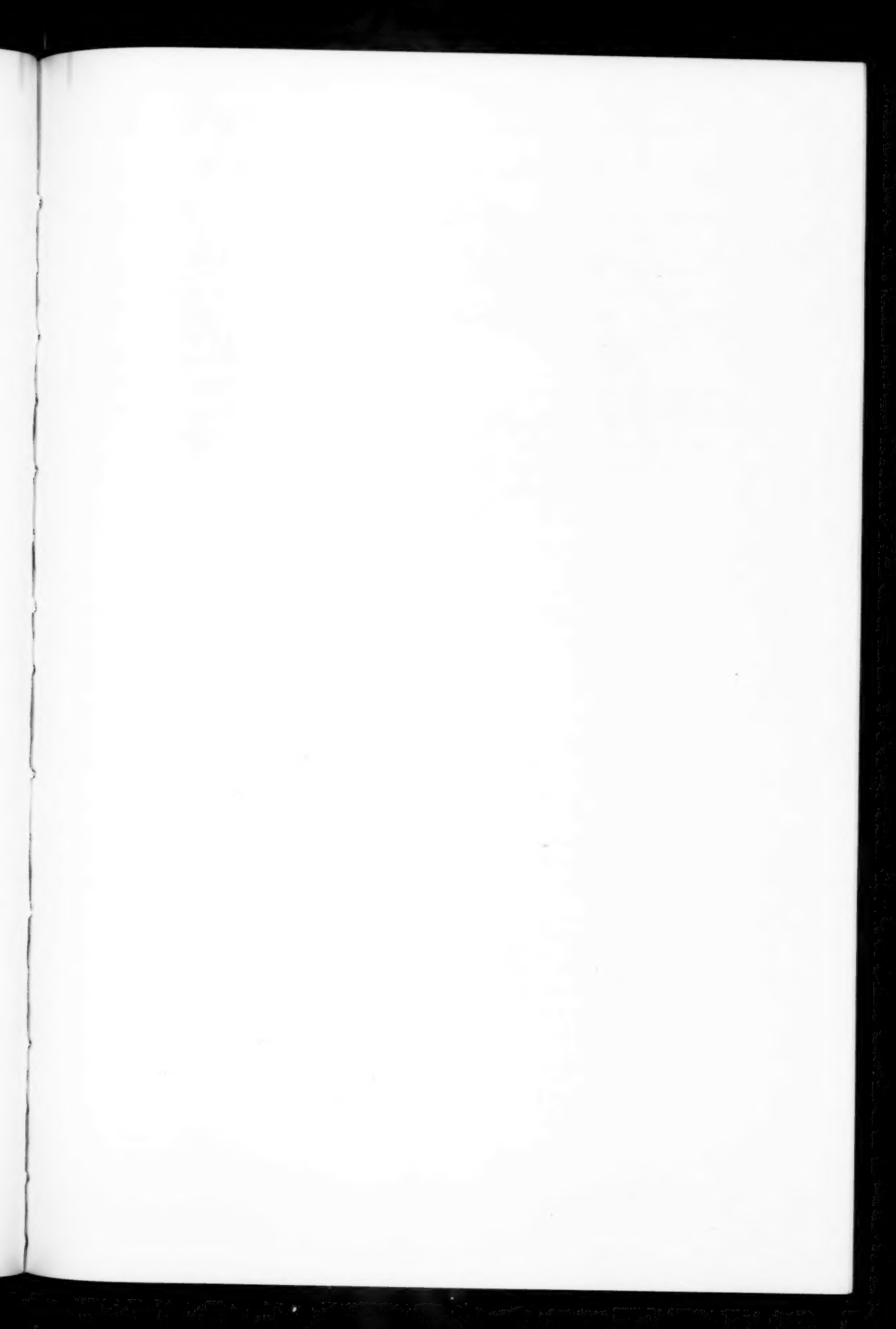


Fig. 1—Schema of Brodmann and Vogt showing the cellular cyto and myelo-architectonic of the cortex.









cortex. We call this portion *allocortex* and the rest of the cortex containing the six layers *isocortex*. We will not discuss today the *allocortex* as it would lead us too far, besides it only amounts to 1-12 of all the cortex and is much less important in man than in most of the animals. The higher functions of the cortex are all of them localized in the *isocortex* which covers the greatest part of both hemispheres.

The formation of the reflex arc in the cortical activity being the base of every nervous display is closely connected with the functional values of the different layers of cells. The sensory and excitatory fibers emerging from the mesencephalon and diencephalon and also the associative fibers originating in the different regions of the cortex, run through the corona radiata, having simply crossed the fifth and sixth layers scattered around the small cells of the fourth layer. From there the stimulus goes to the pyramidal cells of the third layer where it stops and accumulates. The pyramidal or third layer transmits it by its axicylinders to other cortical centers by way of the association fibers and to the cells of the fifth and sixth layers by the collateral fibers. These last two layers are efferent in character. The stimulus is transmitted from there by the long tracts, either directly to the cord and periphery, as for example, by the pyramidal tract or to the first relay of the motor centers, the deep ganglions of the cerebrum.

So the fourth layer is primarily that of reception. The third that of association. The fifth and the sixth of efference. Cajal considers the second layer as the place of origin of the corpus callosum fibers, that is, of one of the associative systems, but other authors consider it as a layer of cellular reserve because it diminishes with advancing age.

The first layer, in which run in the dendrites of the pyramidal and fusiform cells to form there a very dense network, serves as a connecting center of the immediately adjacent cortical areas.

Notwithstanding the fact that the largest part of the cortex consists of six cell layers, the structure is not the same in all parts of the hemispheres. The cortex differs in one point from another by its thickness, by the number, the density and the size of the cells in its layers and the more marked development of one or another layer.

You have already heard of the local and structural modifications known as areas. Campbell distinguished in 1913 only about 20 such areas, but careful investigation in the cortex always brings us new discoveries. At the present time we have isolated 107 areas as seen in a model which I present you here and on which the different areas are painted in different colors.

The schematic representation of the cerebrum in Fig. 5 shows the distribution of the areas marked by different shading. It is what we call a cytoarchitectonic map. It is interesting to note on it that the areas extend over the surface of the cortex with no relationship to the extension of the convolutions and fissures. So, for instance, the area FB and FC cross the horizontal plan of the frontal convolutions at right angles.

The 107 known areas, though they all differ from each other, may be divided structurally into five big groups. The schematic drawing in Fig. 7 shows them simplified and put side by side from number 1 to number 5. We will discuss first types 2, 3 and 4, which are the three fundamental types and which we name according to the region of the cortex they occupy mostly: the frontal, the parietal and the polar type. In the frontal type, number 2, we recognize the well-known six layers. The cortex is thick, not very rich in cellular substance, the cells are well-formed and large, especially the pyramidal cells. The second and fourth layers are present, but they are not very dense. The next one, the parietal type, also shows a thick cortex. The second and fourth layers are much more dense and much thicker than in the frontal type, but the pyramidal cells are smaller and more slender. One of the striking features of this type is its greater richness in cells. The fourth or polar type occurring in both frontal and occipital poles is usually thin and shows a great wealth of cells particularly in its granular layers.

The first type (No. 1) on the left side of Fig. 7, shows a cortex that is very thick, the cells are much larger than those described before. One scarcely sees any second and fourth layers because the granular cells have mostly disappeared. On account of that, we call this type the agranular type. The best example of such agranular cortex is in the pre-central gyrus, which is, as you know, the motor area. The fifth type (No. 5, Fig. 7) we call the granular type. The cortex is very thin, but it is richer in cells than any of









Fig. 12—The agranular area FB in front of the pre-central gyrus.



Fig. 11—The area PC on the crown of the post-central gyrus.



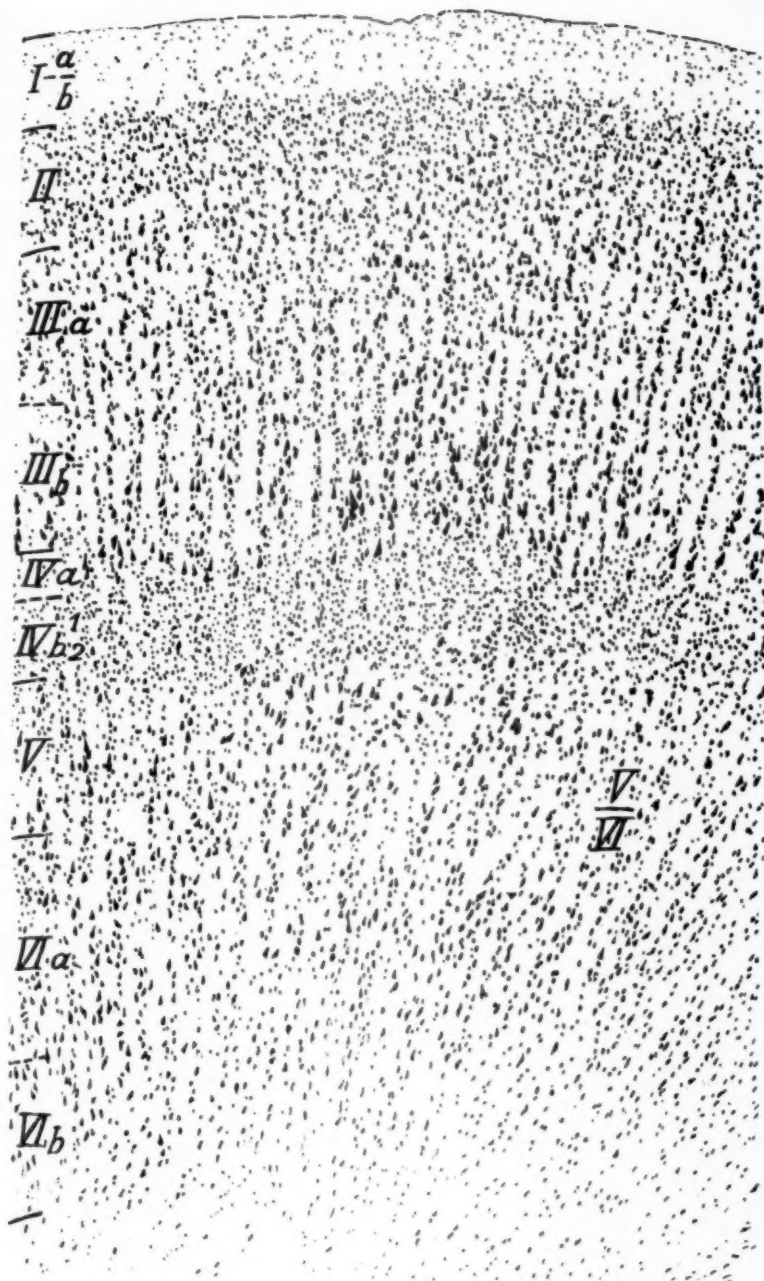
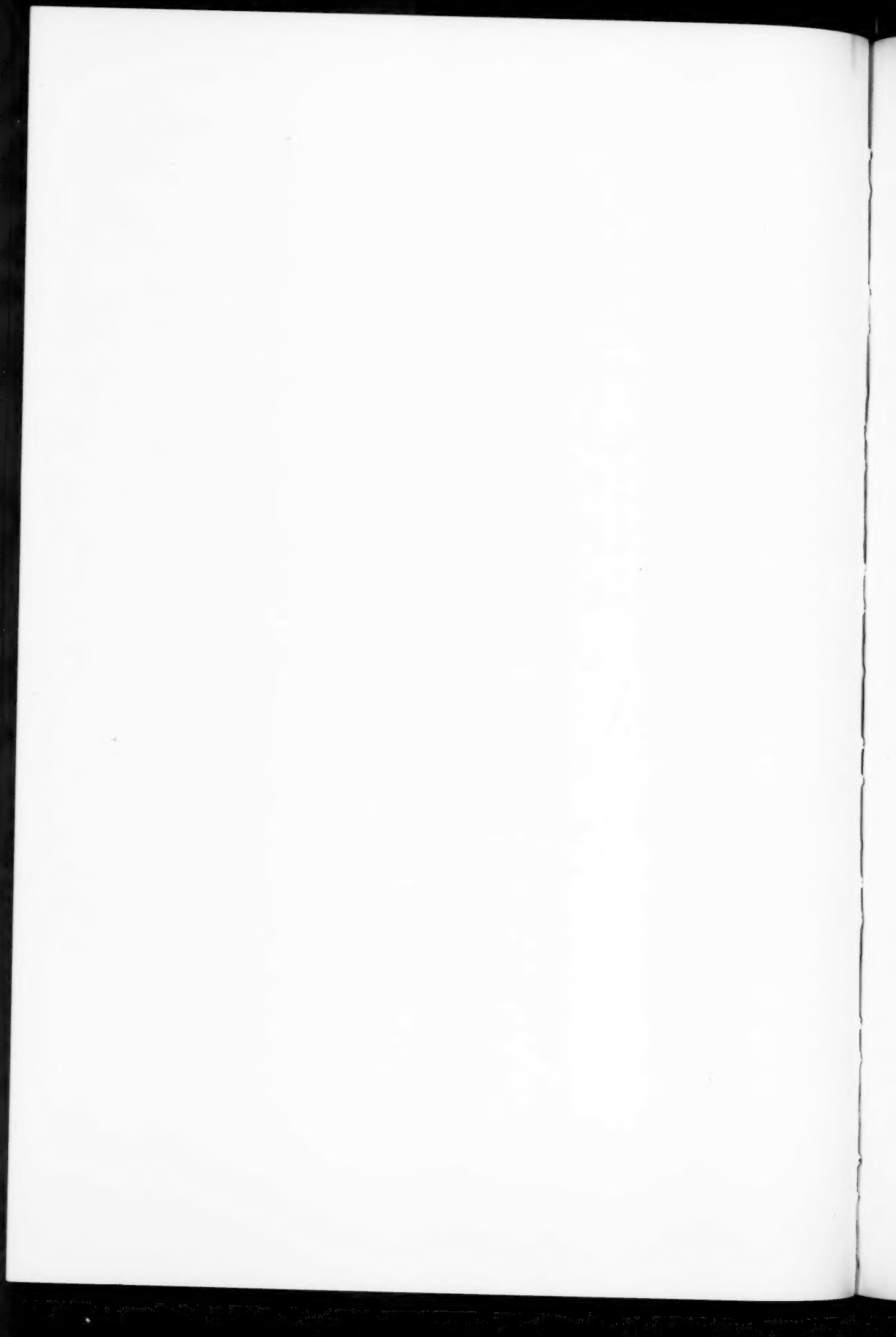


Fig. 13—Parietal cortex area PF.





the previous types. All the cells, however, are extremely small even the pyramidal cells of the third layer. They resemble grains of sand. The impression is that the whole cortex section is covered with granular cells. Therefore, we call it the granular type, or by a Greek word, the koniocortex. In the koniocortex the fifth layer is generally rarefied and looks much lighter in the slides than the rest of the cortex. We find that sort of cortex in the sensory portion of it, where the sensory fibres coming from the thalamus reach the cortex.

Figure 8 shows the sensory type of the cortex on the first convolution of Heschl on the temporal lobe. You again observe the great quantity of small cells filling all the surface. Figure 9 shows the cortex on the next convolution just a few millimeters from the other, giving a good example of the parietal type with its six alternating layers of big pyramidal and smaller granular cells. Figure 10 again shows the sensory tactile type of cortex in the anterior wall of the post-central convolution. One sees again the great quantity of small cells covering all that sensory cortex. Figure 11 shows a photograph of the crown of the post-central convolution just a few millimeters from the other showing again the parietal type.

As a further example of cortical type, Figure 12 is shown demonstrating the agranular type, taken in front of the pre-central convolution. In this are seen the big pyramidal cells and the lacking of the granular second and fourth layer.

The large regions of the brain covered by these five types are subdivided as I already told you in small anatomical areas. It is probable that each area has a special physiologic function, significance of which is not yet known but the effect of the activity between them represents what we call a cerebral function. At the present time we must leave alone this speculation as to the physiologic significance of each area, and we must make our scientific advances only along anatomical lines, but we may correlate our anatomical knowledge with our physiopathological experiences. Figure 15 shows the progressive anatomical differences of the areas in the frontal lobe from the pre-central gyrus to the frontal pole. Without going into details, I will say that the thickness of the cortex is at its maximum in the pre-central gyrus area, FA and FB. It progressively diminishes in thickness and in the

size of its cells towards the anterior poles. The granular layers II and IV which were almost absent in the pre-central gyrus gradually increase in thickness and density as it approaches the frontal pole (FC, FD, FE, FG). You see the limits of these areas marked on the surface of the brain in Fig. 5. Let us now try to localize the different functions of the brain by projecting them on a brain map showing the physiological functional areas, Fig. 16. You will notice the area immediately in front of the Rolandic fissure corresponds to the electromotor area on which electric irritations result in isolated elementary movements. Cytoarchitectonically it corresponds to the agranular area FA which contains the giant cells. Immediately in front of this electromotor region there comes a series of motor centers of higher order of activity. That for walking upright is on the first frontal convolution, the centers for writing movements are on the second frontal convolution, and further ventrally are the centers for mastication and swallowing, as well as for phonation. All these last-named locomotor complexes are located in that part of the cortex showing architecturally the still agranular structure FB.

More frontally in the region of architectural structure FC we find on the third frontal convolution Broca's center for motor speech, and dorsally on the second and first frontal convolution in the area FC the centers for the combined trunk, head and eye movements, especially for the so-called "spying" movements of the eyes on the second frontal. All these movements are presentations of attention. As with speech itself, these movements involve many psychic components and it is remarkable that this fact is expressed in the anatomical picture of the corresponding area FC by a gradual increase in the number of the granules of the cortex in the second and fourth layers.

Still more frontal to this region we find the richly granuled portions of the frontal area AFD and FE (Fig. 5). The experiences of the war have taught us that lesions in this region, called the pre-frontal region, result in the disturbance of attention, of psychomotor activity, of will, and emotivity. One also witnesses the appearance of ethical defects and of morally regressive changes in character.

These observations lead us to the localization of certain of the

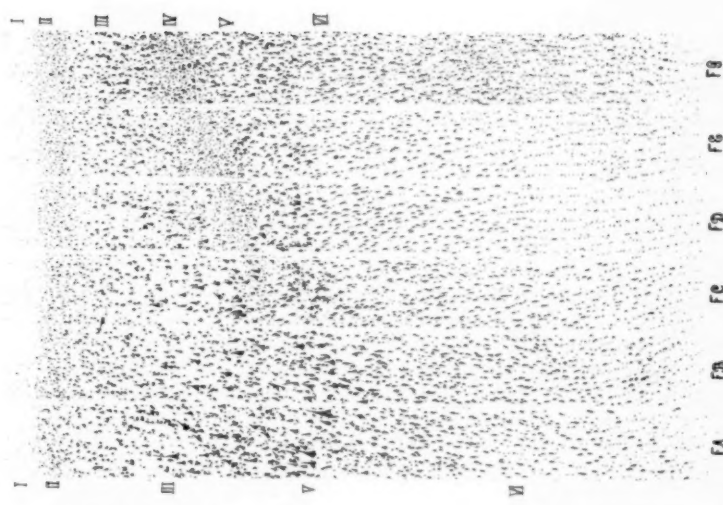
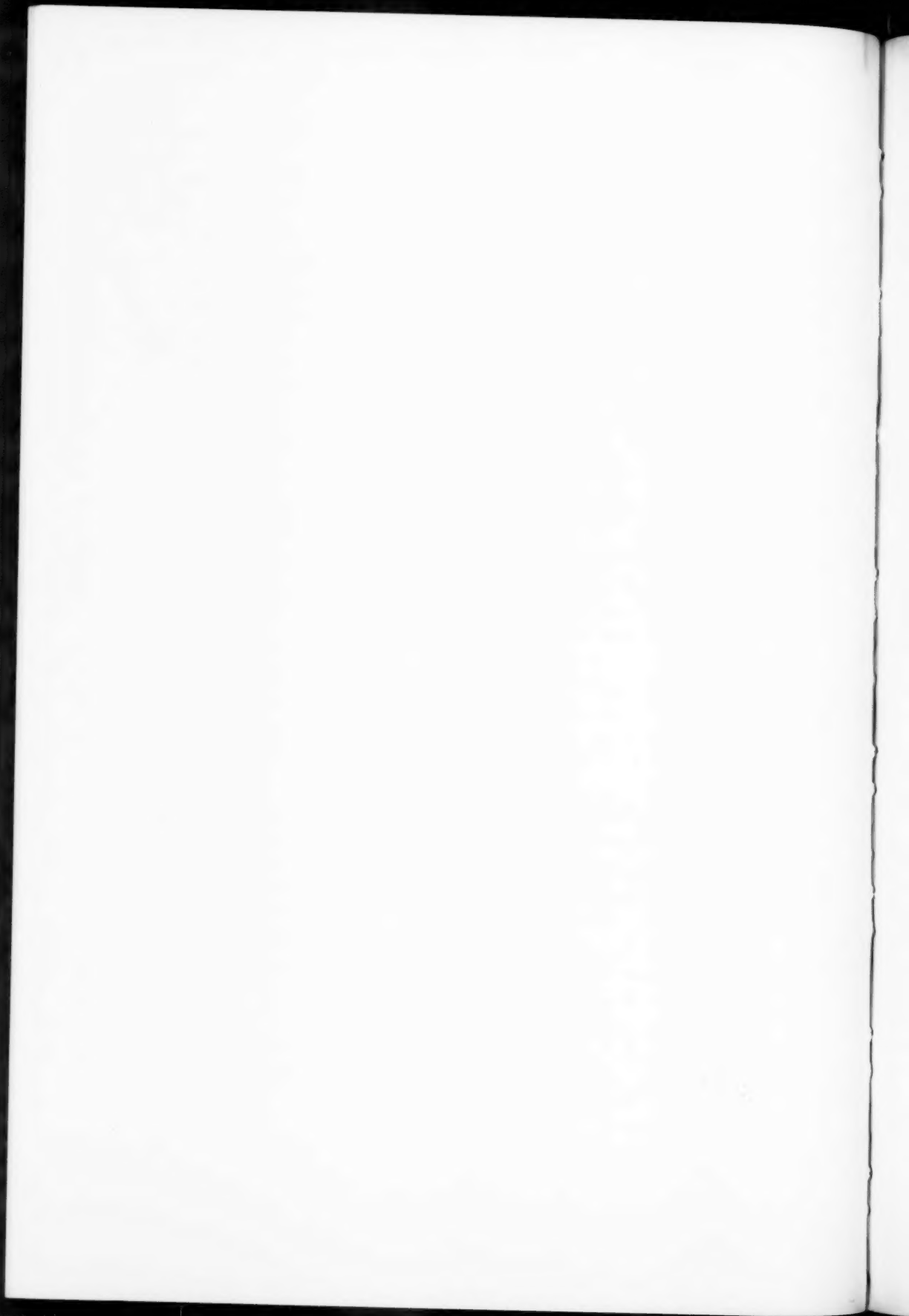


Fig. 15—Progressive change of character of the frontal cortex from the pre-central region FA to the polar region FG



Fig. 14—Polar occipital cortex area OA.







higher psychic functions in these frontal regions of the brain. But these functions, such as attention, psychomotor activity, the will, and so on, are various forms of personal activity, which is a motility of the highest order, as it were. This is in the meantime a part of the psychic personality and we call it the active part of it.

We may say then that in the frontal lobe from the Rolandic fissure to the frontal pole motility lies eccentrically in such a manner that the most simple motility occupies the pre-central gyrus, but as it approaches the pole it progressively increases in complexity and in psychic components. The more the complexity increases the greater the number of granular cells in the fourth layer of the frontal cortex.

Let us look now at the parietal lobe behind the fissure of Rolando. Between the three sensory spheres which are most important for human understanding—those of touch, sight and hearing, located in the post-central and in Heschl's supratemporal convolutions and the walls of the calcarine fissure, there is a wide cortical field on the convexity of the hemisphere occupied by the parietal cortical type 3.

It is very probable that each immediate border of the sensory spheres serves the apperceptions of these senses and their memory impressions. Next to these areas comes a series of centers which, as we have learned from pathology, are progressively superimposed in a scale of complexity and the lesions of which produce gnostic defects (f. i. cortical deafness, apperception of words, understanding of words). Lesions of the most central, caudal, and basal portions of this district, which comprises the gyrus angularis and the basal portions of the inferior parietal lobe, provoke disturbances of a still higher order which gives the impression of psychic and intellectual defect. Head has called such defects asemantic ones, which means that the understanding of the importance of things of the external world has suffered, so that the contact with the suitable, purposeful actions of conduct has also suffered as a result. In such cases there is a disturbance of a part of the psychic personality and this is the receptive-apperceptive part of the personality. There is thus such a thing as an intellectual defect of a sensory-receptive nature, produced by lesions of the infra-parietal lobe.

The architectonic comparison of the human cortex with that of animals shows us that these frontal and parietal higher centers of active and receptive intelligence in the frontal and parietal lobes are almost lacking in the brains of the latter, (Fig. 17). This means that there are new acquisitions of the human brain, just as the third frontal convolution being the center of speech, is a recent acquisition. The deficiency of both these big centers in the frontal and in the parietal lobe are the cause that the purely motoric and sensory areas in the brain of animals seem to approach each other much more than in the human brain, as can be seen from Figure 17 representing the brain of a rabbit, a monkey, and a human brain, the sensory and motoric brain parts being shaded.

In addition, the examination of animal brains has shown that they often reveal areas of one single type of structure which in human brains are divided into quite a number of well-defined individual areas; for instance, the first five areas of the human superior parietal lobe, PA, PB, PC, PD and PE, form only one single area in the brain of mice. Such regions in the animal brain reveal then an indistinctly mixed architectonic structural type. Thus we find that there is not only an increase in the mass of the brain as we pass from the lower animals up to man, but also an increase in the number of areas, i. e., a special differentiation of the various portions of the cortical surface. By this differentiation new areas, that means new cortical organs, which are to be valued as recent cerebral acquisitions, develop in the human brain. To these new organs there must correspond new cerebral functions and it is very plausible to connect these two architectonic structure in the frontal and parietal lobe with the specific human functions of intelligence as our physiopathological experience has proved—in other words the phylogenetic perfection of man on an anatomical cytoarchitectonic basis.

New studies of the skull-casts of the developmental stages of various prehistoric types, such as Elliott Smith, Tilney, Osborn and others have carried out have taught us that in the scale which begins with *Pithecanthropus* and lead by way of *Eoanthropus*, *Rhodesian*, *Neanderthal*, *Monsterial* and *Cro-Magnon*, to the modern man, there is a gradual increase of precisely those cortical, basal, and parietal areas to which we have just ascribed by compara-





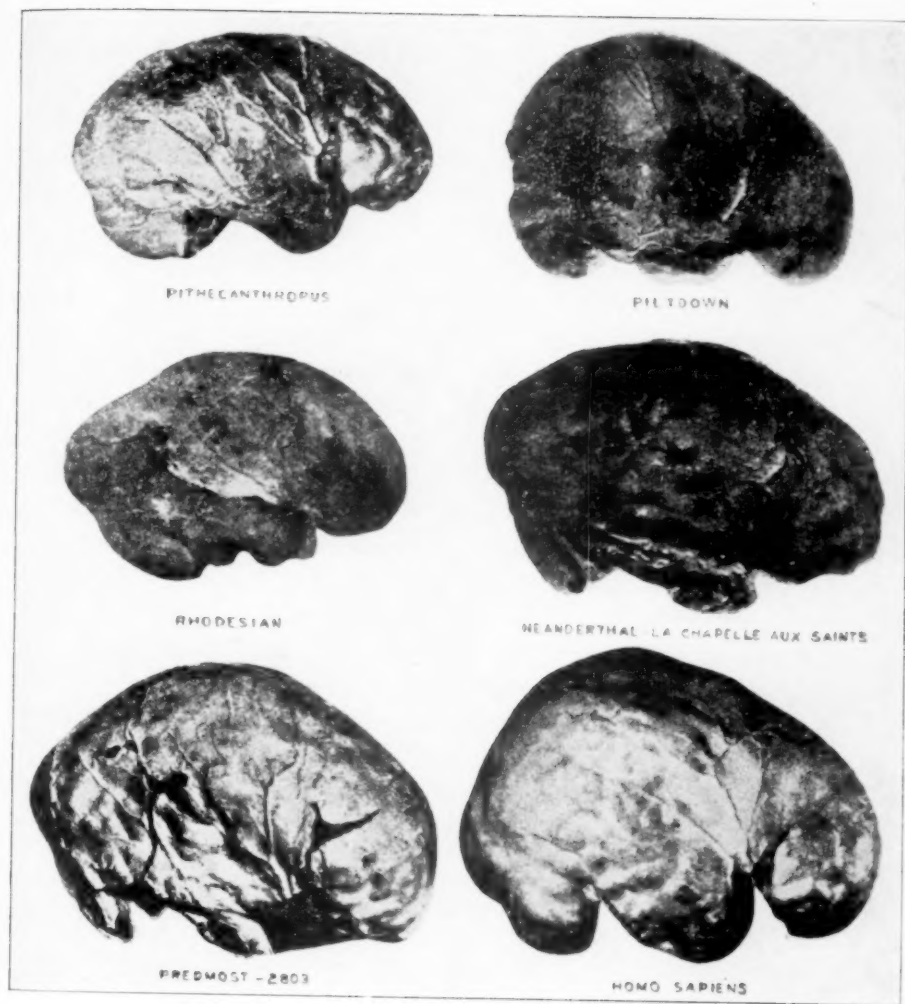
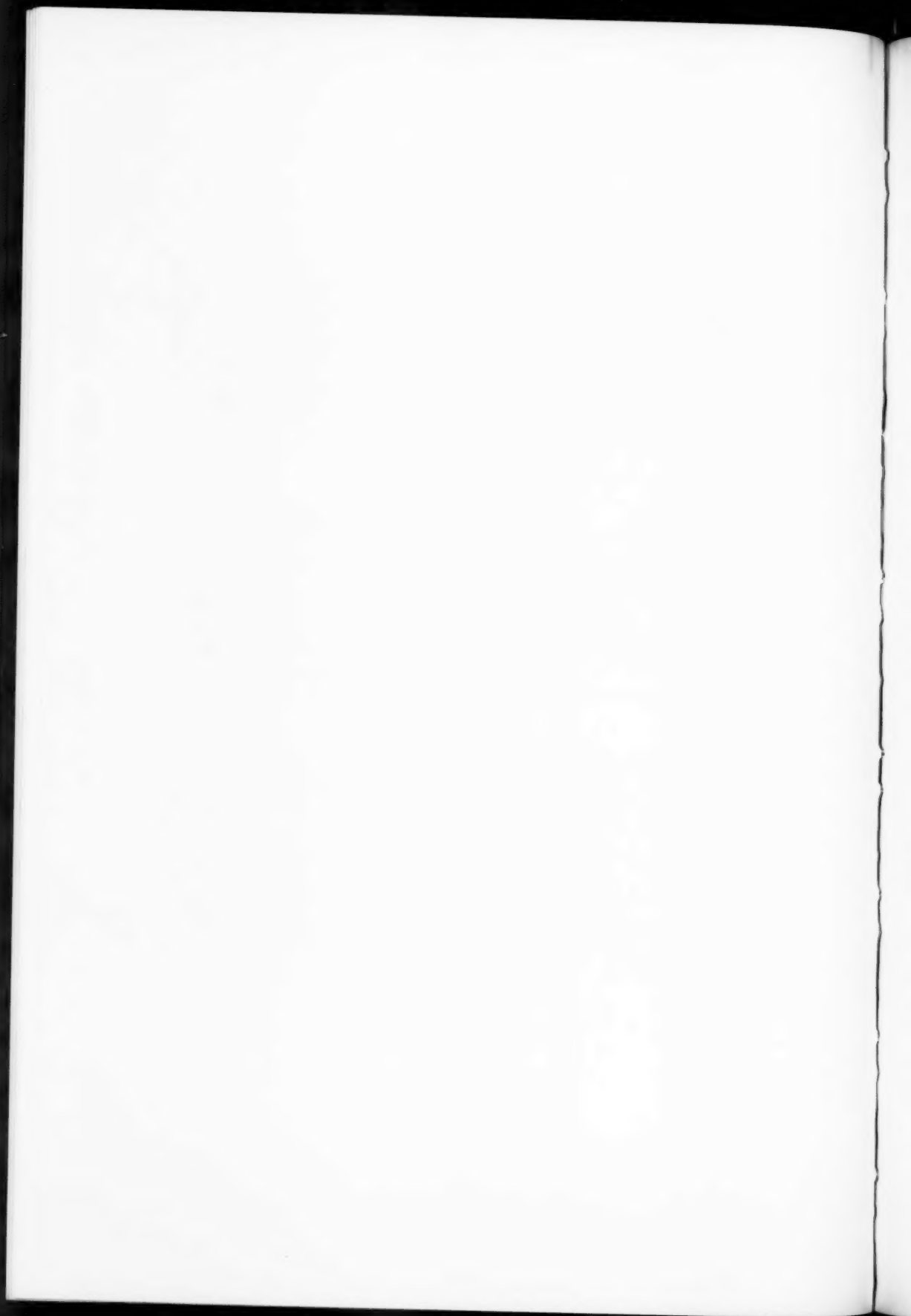


Fig. 18—Brain casts (photos taken by J. Tilney).





tive anatomical research the intellectual human function (Fig 18). We are even able to reconstruct some superficial architectonic areas configurative of antediluvian man by the knowledge of some of their gross anatomical peculiarities in some regions of the brain. We know, for instance, by skull casts that those ancestors of ours had what we call an operculum occipital (Fig. 19, L) very similar to that in monkeys. Now we know by the exceptional occurrence of such an op. occipital in modern man, that it corresponds to an extension in the primary sensory visual areas over the convexity of the brain, whereas in the normal modern brain this area is smaller and runs only on the mesial surface. Such an extension of the sensory area over the convexity of the brain reduces the space left in the lower parietal lobe from the higher psychic functions of association, and it is the increase in associative parts of the brain in modern man that has caused the recession of the sensory cortex and the mesial surfaces.

So this species of vertebrates called homo sapiens reveals besides a certain phylogenetic increase in the mass of its brain, primarily an increase and progressive differentiation of those cerebral organs which are, as we have seen, a new acquisition of the human brain. This process of not only increased mass but also of progressive architectonic differentiation of specific structures of the brain in the evolution of one species, this acquisition of new cerebral organs is what I want to call progressive cerebation.

There are two fundamental laws in paleontology: first the law of Dolo, namely, the irreversibility of evolutionary processes. This means that there is a certain organ in a given species that assumes a definite course of development. This course can never be reversed to the former stage. The second law—that of Osborn and Abel—about rectigradation and orthogenesis has to do with inertia in development. This means that once an organ has acquired a certain direction of development, it continues to evolve in that same direction automatically after the primary stimulus has ceased. According to these two laws, progressive cerebation indicates biologically not merely a quantitative increase in capacities already present, but the possibility of the development of new cerebral organs in the cortex which makes possible the development of new

and yet unknown psychic capacities, a circumstance which opens up entirely new perspectives for the development of manhood. In the light of this, the path of human culture from the flint stone of the Eoanthropus to the sky scrapers of New York represents not only an accumulation of achievement from generation to generation, but is also the expression of a genuine progressive development of man's brain.

# THE NEW YORK PSYCHIATRIC INSTITUTE AND HOSPITAL

## *A Sketch of its Development from 1895 to 1929\**

BY GEORGE H. KIRBY, M. D.,

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COLLEGE OF PHYSICIANS AND SURGEONS, COLUMBIA UNIVERSITY

In the second half of the nineteenth century psychiatry made many notable advances, particularly from the standpoint of housing mentally ill patients. At the same time there were small scientific groups that led the way to a deeper understanding of abnormal mental reactions; these groups, however, occupied themselves largely with efforts to describe disease entities or to construct classifications based on abstract conceptions and insufficient appreciation of research work as we understand it today. This was carried out on a small scale by individual workers, principally on their own initiative. Later, in 1890, when the State of New York took over the care of the State hospitals, those in charge soon saw the need of adopting a policy which would stimulate and develop more intensive clinical and laboratory studies by the physicians in the State institutions. The idea was then conceived of having a central laboratory where special studies and scientific research could be carried on for the benefit of the State hospital system and the general advancement of knowledge in the field of psychiatry and allied subjects. Finally, in 1895, the State Hospital Commission established the "Pathological Institute." This was located in New York City in rented quarters in an office building at No. 1 Madison Avenue. Its first director, Dr. Ira Van Gieson, was a neurologist with dominant neuropathological interests. His staff was ably chosen from a corps of workers representing a varied approach to the problems of mental diseases. The aims of the Institute as originally planned, were stated in the words of its first director to be as follows: "to carry on studies on abnormal mental life and their neural concomitants, based on Psychology, Psychopathology, Experimental Physiology and Pathology, Cellular Biology, Pathological Anatomy, Comparative Neurology, Physiological Chemistry, Anthropology and Bacteriology."

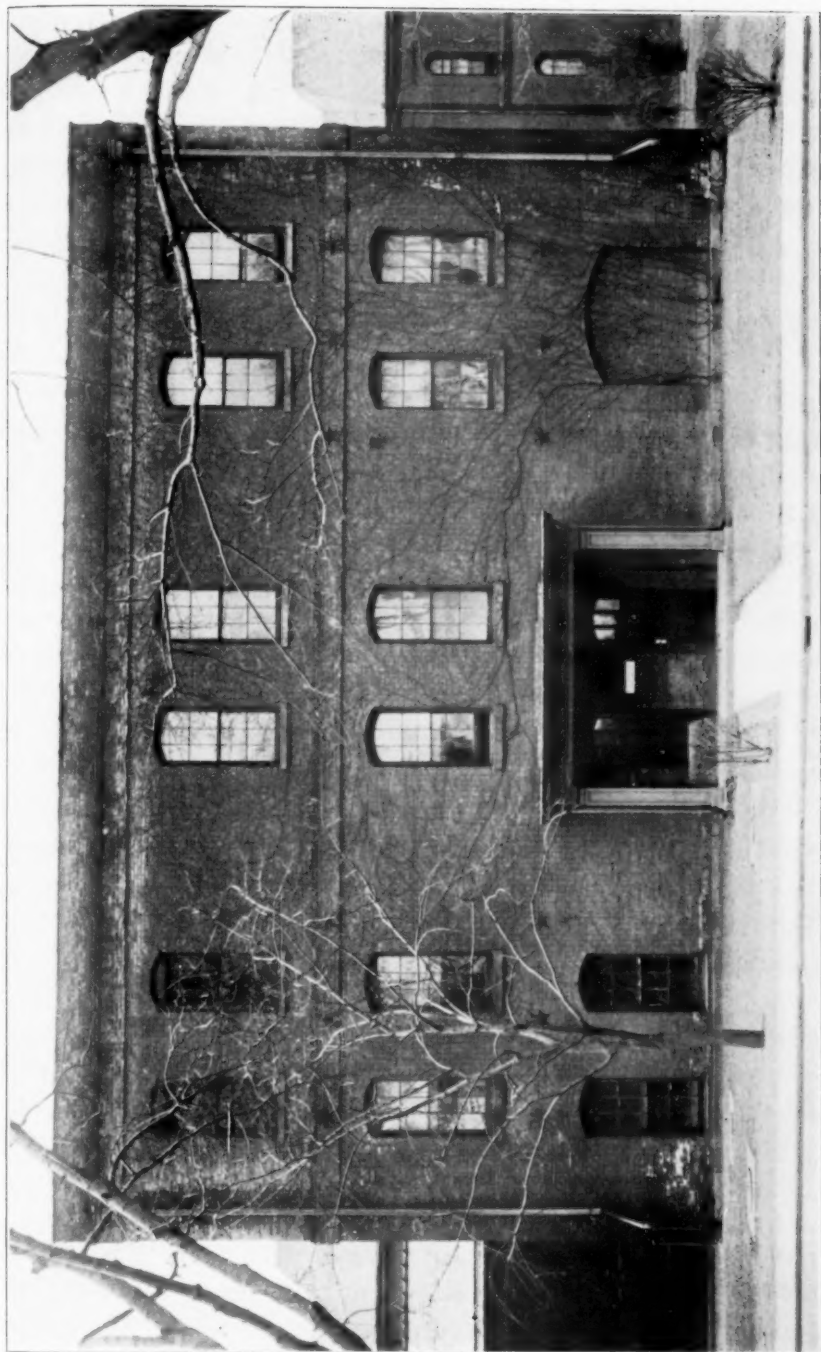
\* It is a pleasure to acknowledge the valuable assistance rendered by Dr. Howard W. Potter and Dr. Leland E. Hinsie in the preparation of this paper.

Van Gieson planned what he called a "correlation of sciences." His *magnum opus* was a monograph of over 250 pages ("The Correlation of Sciences in the Investigation of Nervous and Mental Diseases"), in which he set forth in great detail the purposes of the Institute. To this day many of his fundamental aims have been kept, though the means by which the aims were to be achieved have shifted to entirely new methods of approach. On his staff were representatives of the various departments of medicine mentioned in the foregoing paragraph, the scientific workers consisting of the director and ten associates. Van Gieson confined his own interests to the neuron. In collaboration with Boris Sidis (associate in psychology and psychopathology) he "set forth in concrete diagrammatic form a theory that attempts to correlate the various general manifestations of psychomotor life with more or less definite physiological processes depending on the expenditure or restitution of neuron energy." (See "Neuron Energy and Its Psychomotor Manifestations.") Divorced as he was from close contact with any clinical material and not having any anatomical material of cases well studied and observed in life or even any adequate experimental facilities, Van Gieson's elaborate program proved to be most disappointing and in May, 1901, he resigned.

The Institute was then moved to Ward's Island as a "temporary expedient until such time as a reception hospital can be established in New York City on Manhattan Island and the Institute (can be placed) in close connection with some clinical material at once." Nearly thirty years later this ideal was established by the erection of the present Psychiatric Institute and Hospital at the Columbia-Presbyterian Medical Center in New York City.

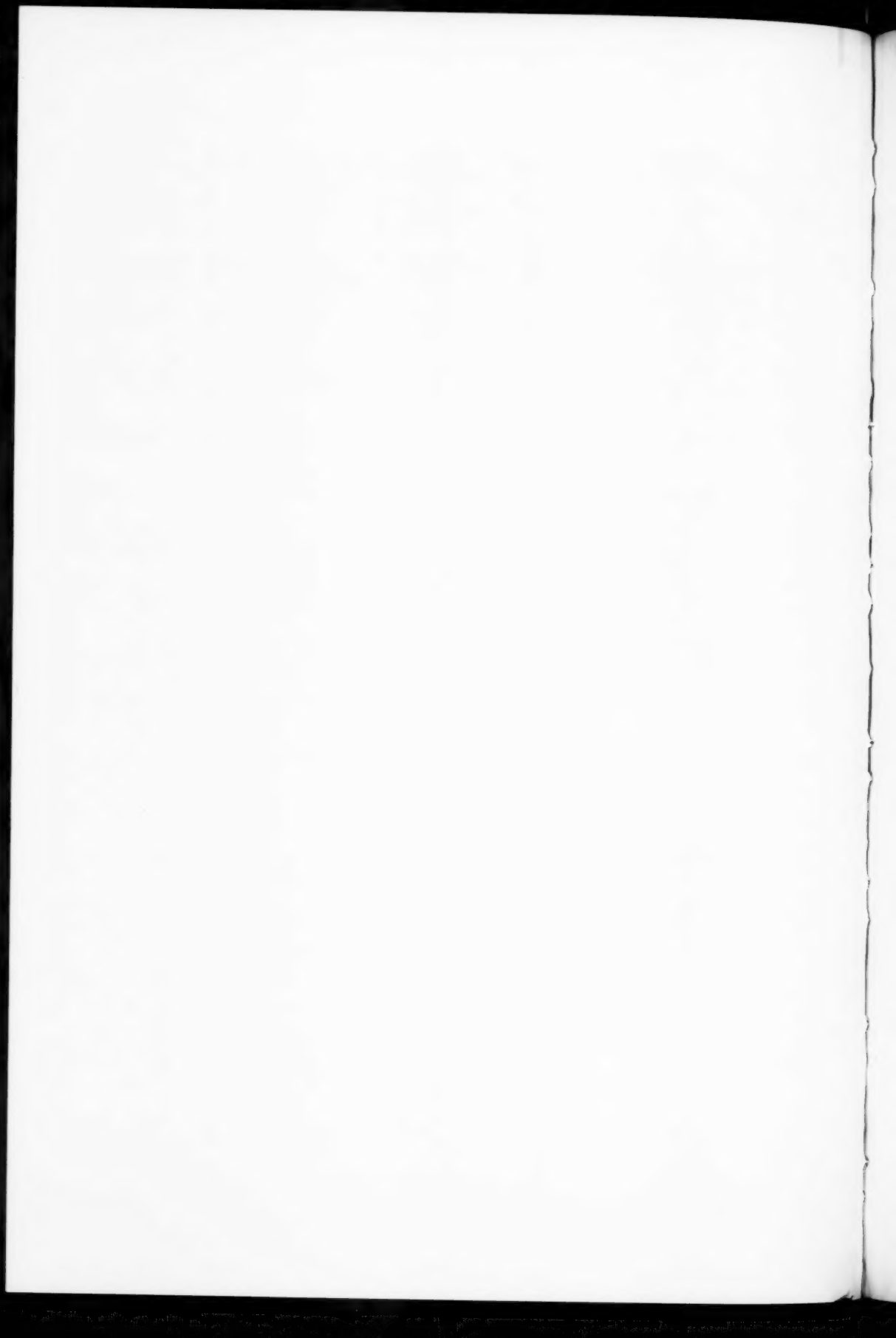
In 1902, Adolf Meyer, at the invitation of Commissioner Frederick Peterson, became the second director of the Institute and with him came a new spirit and a new conception of the functions of the Institute; and also came a willingness to carry on the work with very inadequate facilities and a limited personnel. The laboratories and lecture hall of the Institute were housed on two floors of a small building and through the courtesy of the superintendent of the Manhattan State Hospital, two wards were set apart for the study of patients by the Institute's clinical staff. From 1902-1910 (the duration of Meyer's directorship), the Institute





BUILDING OCCUPIED BY THE PSYCHIATRIC INSTITUTE ON WARD'S ISLAND  
FROM 1902 TO 1929





became an outstanding center for psychiatric research and teaching not only in New York State but throughout the country. Meyer's thorough familiarity with the conceptions of the leading European workers (Forel, von Monokow, Dejerine, Nissl, Kraepelin and Clouston) with many of whom he had studied in both the clinic and laboratory, gave him a broad outlook over the whole field of psychiatry and allied branches of medicine. In 1908 the name "Pathological Institute" was dropped and the institution became officially known as the New York Psychiatric Institute.

Meyer in addition to his valuable neuropathological studies, especially tract and focal brain lesions, approached the large group of functional mental disorders from the psychodynamic viewpoint and habit deterioration; he gradually outlined the essential psychopathological reaction types and finally formulated his now well known psychobiological interpretation of mental disorders. Meyer also introduced the plan of giving systematic courses of instruction to groups of physicians from the State hospitals and made, with members of his staff, frequent visits to the various institutions where special topics were discussed and conferences held.

Meyer had as collaborators during this early period of reorganization and development of the Institute, Charles B. Dunlap (neuropathology), George H. Kirby (clinical psychiatry), Phoebus Levene (chemistry), Macfie Campbell (clinical psychiatry), Charles I. Lambert (neuropathology), Glanville Rusk (general pathology and autopsies), Joseph W. Moore (serology and neurosyphilis) and David K. Henderson (clinical psychiatry).

In 1910 when Meyer was called to the Henry Phipps Psychiatric Clinic at Johns Hopkins, August Hoch became the third director of the Institute. Under his guidance for the next seven years, the Institute continued to exert a strong influence throughout the State hospitals and particular emphasis was placed on raising the standards of clinical study, on newer methods of treatment and the stimulation of greater interest in laboratory work. Hoch's main interest was in the rôle of psychogenetic factors in mental disorders and the influence of the personality trends as predisposing to certain types of psychoses. He was especially attracted to the

Freudian theories and the mechanistic interpretation of psychotic symptoms. His teachings and contributions in these fields proved to be extremely stimulating to the progress of psychopathology in this country. Dr. Hoch retired as director of the Institute in 1917 on account of ill health. Outstanding among the coworkers of Dr. Hoch's period were Charles B. Dunlap (neuropathology), John T. MacCurdy (psychopathology), William W. Wright and Glenn E. Myers (clinical psychiatry), Lyman Wells (experimental psychology) and Sterne Morse (serology and physical chemistry).

In 1917 the present director took charge of the Institute, having been for the preceding eight years clinical director of the Manhattan State Hospital. The general plan of teaching and research developed by Meyer and Hoch was continued. Fortunately, a more liberal policy toward the Institute was adopted by the State authorities during this period so that the scope of the work was considerably enlarged and several new departments were added. Clarence O. Cheney was appointed assistant director; Charles B. Dunlap continued in charge of the neuropathological work until his death in 1926. He was succeeded by Armando Ferraro who became associate in neuropathology. Other associates appointed were: Nicholas Kopeloff (bacteriology) and Charles E. Gibbs (internal medicine). Assistants in other departments were Sterne Morse (serology and physical chemistry), George S. Stevenson, Bertram D. Lewin and L. Raymond Morrison (neuropathology), Lillian Segal (biological chemistry), Charles O. Fiertz (clinical psychiatry). Leland E. Hinsie, appointed assistant physician, was later promoted to the position of senior assistant and still later became research associate in psychiatry. Dr. Cheney resigned in 1922 to become assistant superintendent of the Utica State Hospital and was succeeded by Henry A. Bunker who was in turn succeeded by Howard W. Potter, the present assistant director.

During this period the interests of the staff were varied but the work centered mainly on the so-called functional psychoses and neurosyphilis. As outstanding contributions should be mentioned studies in schizophrenia dealing with both its psychological aspect and pathological anatomy; the histopathology of the endocrine glands in schizophrenia and other psychoses; the rôle of focal infections in the psychoses; constitutional and personality studies in both

organic and functional psychoses; the newer methods of treatment of general paralysis and particularly the malaria therapy. The post-graduate courses for State hospital physicians were better organized and more regularly given and inter-hospital conferences were conducted on a regular schedule. The result was a further unification of the medical services throughout the State hospital system.

During the past few years the director has been deeply engrossed in the practical issues attendant upon the planning and building of the new Psychiatric Institute and Hospital, the first authorization of which was provided by legislative enactment in 1920. It was originally thought that the Institute might be located on land donated by the City of New York. This plan was opposed by the then mayor of the city and was dropped.

The final development and location of the Institute as it exists today is the outcome of a happy combination of circumstances whereby an opportunity was afforded in 1923 for cooperation between the State of New York and the Medical Department of Columbia University which was then building its great medical center. The necessary legislation was enacted and as a result the Institute and Hospital is now most favorably placed as an affiliated unit in the largest and probably the most active medical center in the world. The Institute preserves its identity as a unit built and financed by the State of New York but in its teaching and scientific work having intimate associations with the other units and departments of the medical center; this affords a splendid chance for a personal contact of its staff with clinicians and research workers in practically all other branches of medicine, many of which overlap the field of psychiatry and present many problems of mutual interest. The opportunity to present psychiatry to medical students in an environment similar to that in which other branches of clinical medicine are taught will certainly tend to emphasize the dignity and importance of the subject to the undergraduate students as well as to the teachers of other branches of medicine. The closer contact of students with the problems of mental medicine is bound to have important effects on both the teaching and practice of medicine. Since the new Institute has been under construction, the College of Physicians and Surgeons has increased very materially the number of hours devoted to psychiatry in the



curriculum and has announced that in the future it will emphasize the importance of training all students to study and treat the whole individual—his mental as well as his physical reactions. Such a plan will, we believe, do much to change the attitude of physicians toward the large group of patients, encountered in practice, suffering from incipient psychoses, personality disorders, psychoneuroses and so called functional disorders of various organs and systems of the body. If we can increase the interest and knowledge of physicians in these functional disorders and in the early and pre-institutional phases of mental disorder we will make a most important step forward in the development of a practical and effective mental hygiene program.

At the election of 1923 a fifty million bond issue was approved for the purpose of rehabilitating and developing the State institutions. It was then decided to use part of the funds for the building of a Psychiatric Institute and Hospital. At the suggestion of the late Thomas W. Salmon who was the first one to conceive the idea of cooperation between the State and the University, conferences were started between the chairman of the State Hospital Commission, Dr. C. Floyd Haviland, and the Joint Administrative Board of the Columbia-Presbyterian Hospital Medical Center. The result, as already intimated, was the working out of a satisfactory plan for locating the New York State Psychiatric Institute and Hospital on a plot of land deeded by Columbia University to the State of New York. This plot rising abruptly from Riverside Drive to its level at West 168th Street offered many difficult architectural problems. The building plans as finally prepared by Mr. Sullivan Jones, the State Architect, overcame all difficulties and in December, 1926, the construction of the building was begun. On September 17, 1927, the cornerstone was laid by Governor Alfred E. Smith, who from the first gave his approval and hearty support to the project.

The completed building is a twenty-story fireproof structure. As it is located on a sharp declivity the result is that the first nine stories are built against the side of the hill below the 168th Street level, while the upper eleven stories rise above the top of the declivity. This arrangement has made it possible to have the main entrance from 168th Street on the east side of the building on the



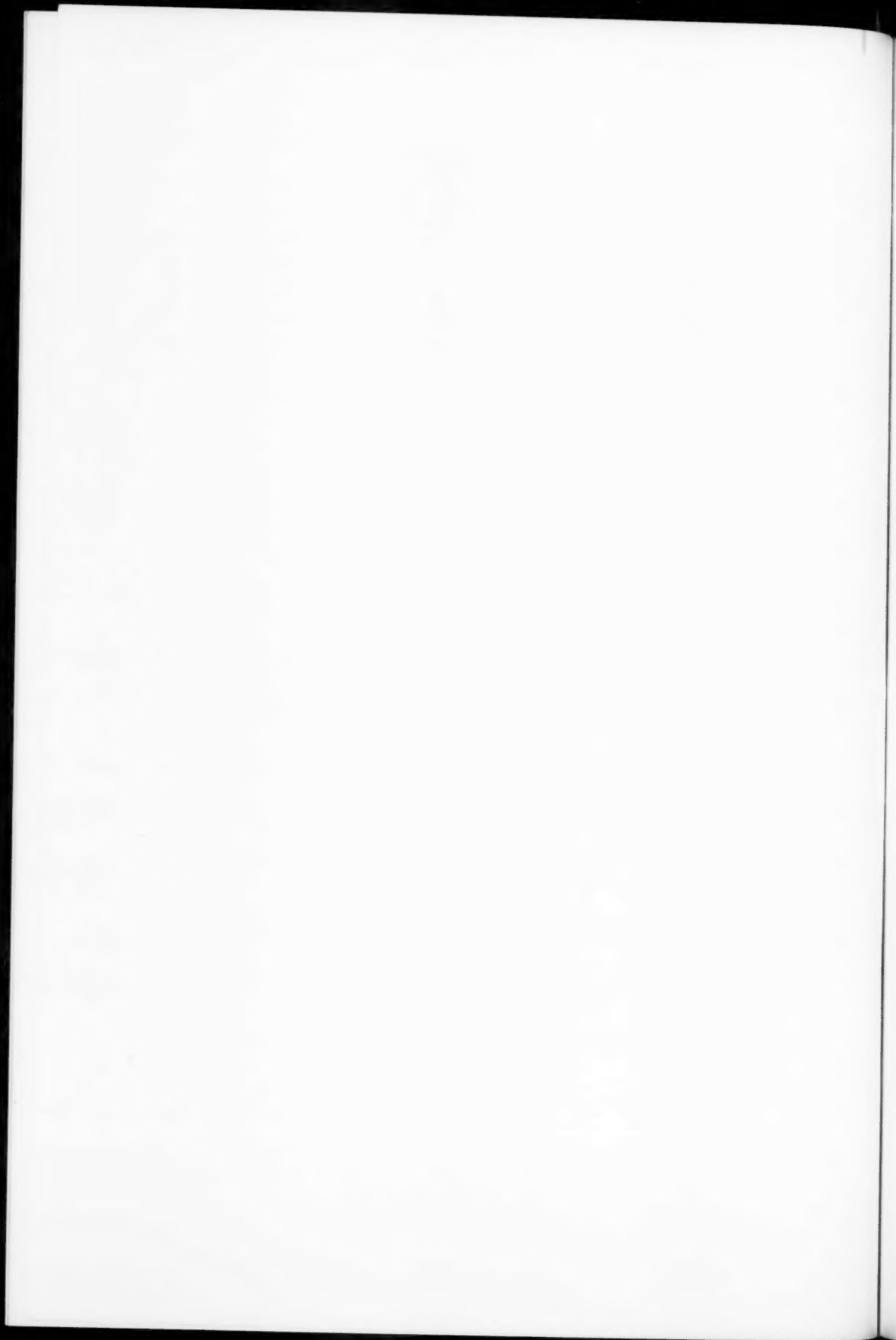
## COLUMBIA PRESBYTERIAN MEDICAL CENTER

VIEW FROM RIVERSIDE DRIVE

THERE ARE SEEN FROM LEFT TO RIGHT:

- |  |   |
|--|---|
| 1. NEW YORK STATE PSYCHIATRIC INSTITUTE AND HOSPITAL | 5. PRESBYTERIAN HOSPITAL — INCLUDING THE VANDERBILT CLINIC, SLOANE MATERNITY, SQUIER UROLOGICAL CLINIC, AND HARKNESS PRIVATE PATIENT PAVILION |
| 2. NEUROLOGICAL INSTITUTE                            |   |
| 3. NURSES' HOME OF PRESBYTERIAN HOSPITAL             | 6. BABIES HOSPITAL  |
| 4. COLLEGE OF PHYSICIANS AND SURGEONS                |   |





tenth floor level. The basement and service entrance, on the other hand, are ten stories below on the west side of the building at the Riverside Drive level.

In general the wards and personnel quarters are all below the tenth floor level affording privacy and quietness with a fine outlook over the Hudson River. The out-patient clinic, administrative offices, library, museum, small lecture halls, and the laboratories are all on the ten upper floors.

Standing close to the Psychiatric Institute, a hundred feet to the East, is the recently completed Neurological Institute of New York. Just to the South, stands the Nurses' Home of the Presbyterian Hospital. An underground passage connects the Institute and all of the different units of the Medical Center.

*Internal Arrangements:* As may be seen from the photograph of the Institute taken from Riverside Drive, the building consists of a central structure gradually stepped back as it rises in height to a tower, the latter beginning at the twelfth floor level. On each side of the central structure there are two wings extending toward Riverside Drive which are connected one with the other at their 168th Street end by a corridor on each floor running the entire length of the building up to the twelfth floor where the tower proper begins and where a connecting corridor is no longer required. The wings at the extreme ends of the building rise as high as the sixth floor level while the two wings nearest the central structure rise to the tenth floor level. The ground plan of the building is essentially that of the letter E with one additional projection on each side of the center.

The distribution of the various activities, the wards, offices, lecture halls, laboratories, etc., can be most readily grasped by referring to the following floor directory:

<i>Floor</i>	<i>Facilities</i>
20	Water tanks and pent house.
19	Pharmacy and linen room.
18	Animal houses and experimental laboratories.
17	Laboratories for chemical, serological and bacteriological research.

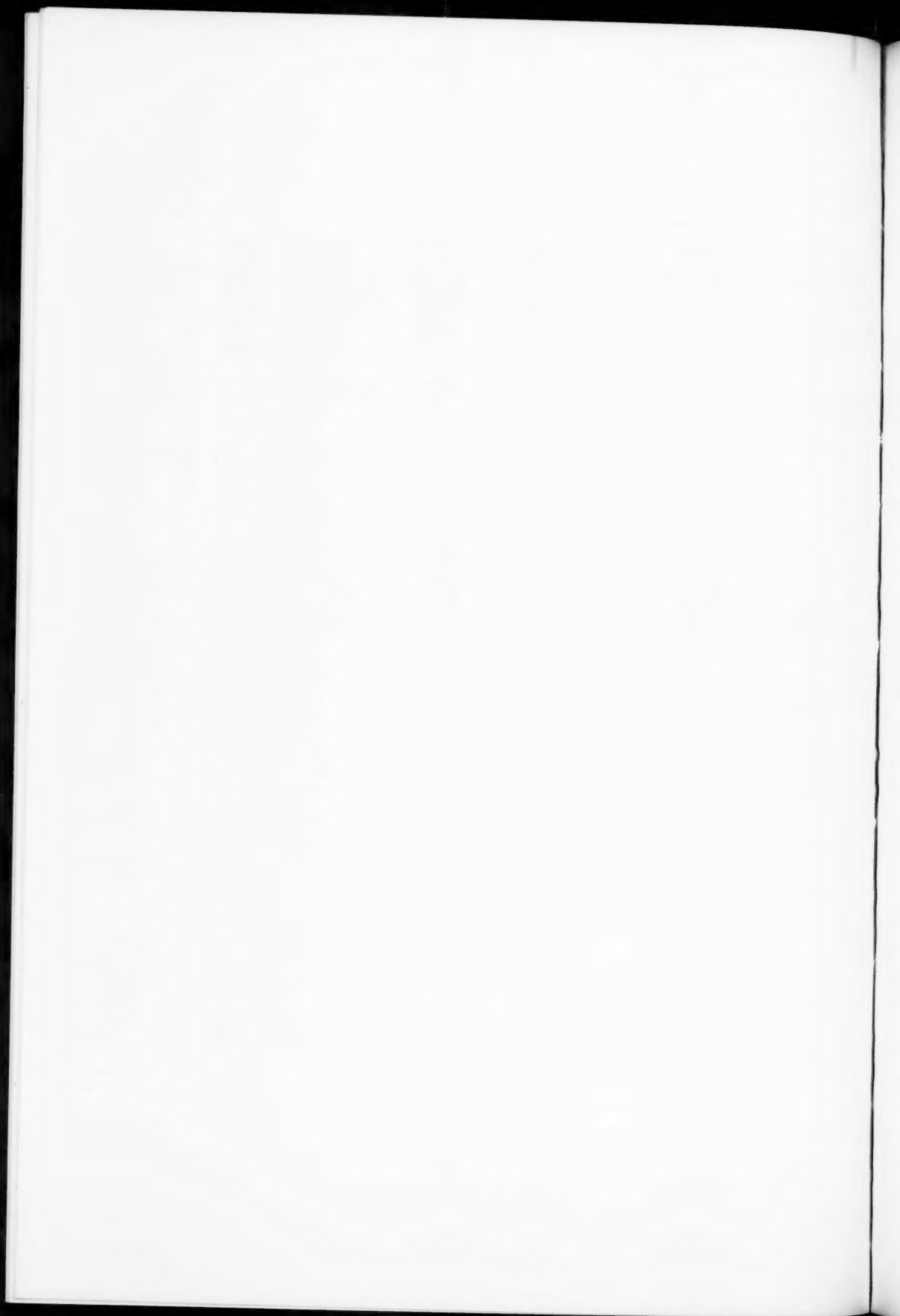
- 16 Laboratories for anatomical and pathological research studies of the central nervous system.
- 15 Laboratories for special research. Lecture hall.
- 14 Staff conference room, record room, and medical administrative offices.
- 13 Laboratory for psychological research. Laboratories for clinical pathology and diagnosis used conjointly by the Psychiatric Institute and the Neurological Institute.
- 12 Medical library and museum with preparation and curator's rooms.
- 11 Center—Special diagnostic room, dental department and physiotherapy department.  
South corridor—X-ray and photographic departments.  
North corridor—Out-patient department.
- 10 Center—Main entrance, administrative and business offices, information desk and telephone service, reception rooms.  
South corridor—Class room, indoor gymnasium for patients, living quarters for physicians.  
North corridor—Classroom, out-patient department, outdoor roof garden for patients.
- 9 Center—Upper story of auditorium and moving picture and projection apparatus.  
South corridor—Reception ward for 16 women patients.  
North corridor—Reception ward for 16 men patients.
- 8 Center—Auditorium, separate entrances for students and patients.  
South corridor—Reception ward for 10 women patients.  
North corridor—Reception ward for 10 men patients.
- 7 Center—Occupational therapy center.  
South corridor—Ward for 16 women patients.  
North corridor—Ward for 16 men patients.
- 6 Center—Surgery.  
South corridor—Medical and surgical ward for 23 women patients.





NEW YORK STATE PSYCHIATRIC INSTITUTE AND HOSPITAL  
NEW YORK CITY  
VIEW OF BUILDING, WITH MAIN ENTRANCE, FROM WEST 168TH STREET,  
SHOWING THE HUDSON RIVER IN THE DISTANCE





- North corridor—Medical and surgical ward for 23 men patients.
- 5 Center—Social rooms for patients.  
South corridor—Ward for 24 women patients.  
North corridor—Ward for 24 men patients.
- 4 Center—School room and play room.  
South corridor—Children's ward for 16 girls.  
North corridor—Children's ward for 16 boys.
- 3 Center—Social rooms and dining rooms for personnel.  
South corridor—Living quarters for nurses.  
North corridor—Living quarters for physicians.
- 2 Center—Social room and dining rooms for personnel.  
South corridor—Living quarters for attendants.  
North corridor—Living quarters for attendants.
- 1 Service entrance, storehouse, kitchen, laundry, chapel, mortuary, carpenter shop, machine shop, paint shop.
- Basement—Power and heating plant, central refrigerating unit, incinerator, plumbing shop.

*Cost:* The completed building including the fixed and movable equipment has cost two and one half million dollars.

*Capacity:* There are two hundred and ten beds for patients. The patients are housed on six floors; the space is so arranged that for each sex there are nine different ward classifications including two reception services for men and two for women, while the children have a special reception service of their own. The ward units are small; the size for each sex ranging from ten patients on the reception service to twenty-four on the ward for the less seriously sick and well-behaved patients.

Living accommodations are provided for one hundred and one personnel. This includes quarters not only for ward personnel and staff physicians but also rooms for ten physicians from the State institutions who come to work or take courses at the Institute.

For purposes of description, the internal organization of the Institute and Hospital may be visualized as having four divisions, namely, (1) a hospital and out-patient division; (2) a clinical research division; (3) a laboratory research division, and (4) an accounting and maintenance division. In addition, there are cer-

tain service facilities for the use of one or another of these divisions, such as a museum and library service, a pharmaceutical and chemical supply service, a record room and stenographic service, and a zoological service.

The hospital and out-patient division comprises male and female hospital departments, an out-patient department, a department of nursing, a social service department, a department of occupational therapy and a department of physiotherapy.

*Children's Service:* The hospital and out-patient departments have special provisions for children. It is expected that one of the most important activities of the new Institute will be centered on psychiatric problems of children. The entire fourth floor of the hospital, comprising four wards with a bed capacity of thirty-two, will be devoted to their study and treatment. Any child who requires examination or treatment away from home will be received. Children will be admitted at any age from babyhood to puberty. There will be school rooms, work shops and play rooms. Two qualified teachers from the ungraded classes of the New York City public schools have been assigned to the Institute by the Board of Education to assist in the teaching and training of the children. Not only will children suffering from definite mental disturbances be admitted, but when hospitalization is indicated we will be prepared to receive any child who shows signs of nervousness, emotional instability or backwardness, or who offers any problem in behavior either in the home or in the school. It is now generally recognized that there is a great need for intensive study of the instinctive and emotional life of maladjusted children and particularly a study of the environment and family situations in which these maladjustments develop. It is more and more realized that these factors, especially distorted and unhealthy parental emotional attitudes, play a most important rôle in producing behavior disorders, delinquencies, neurotic reactions and psychopathic tendencies in children and form the foundation for many nervous and mental troubles which develop in later life.

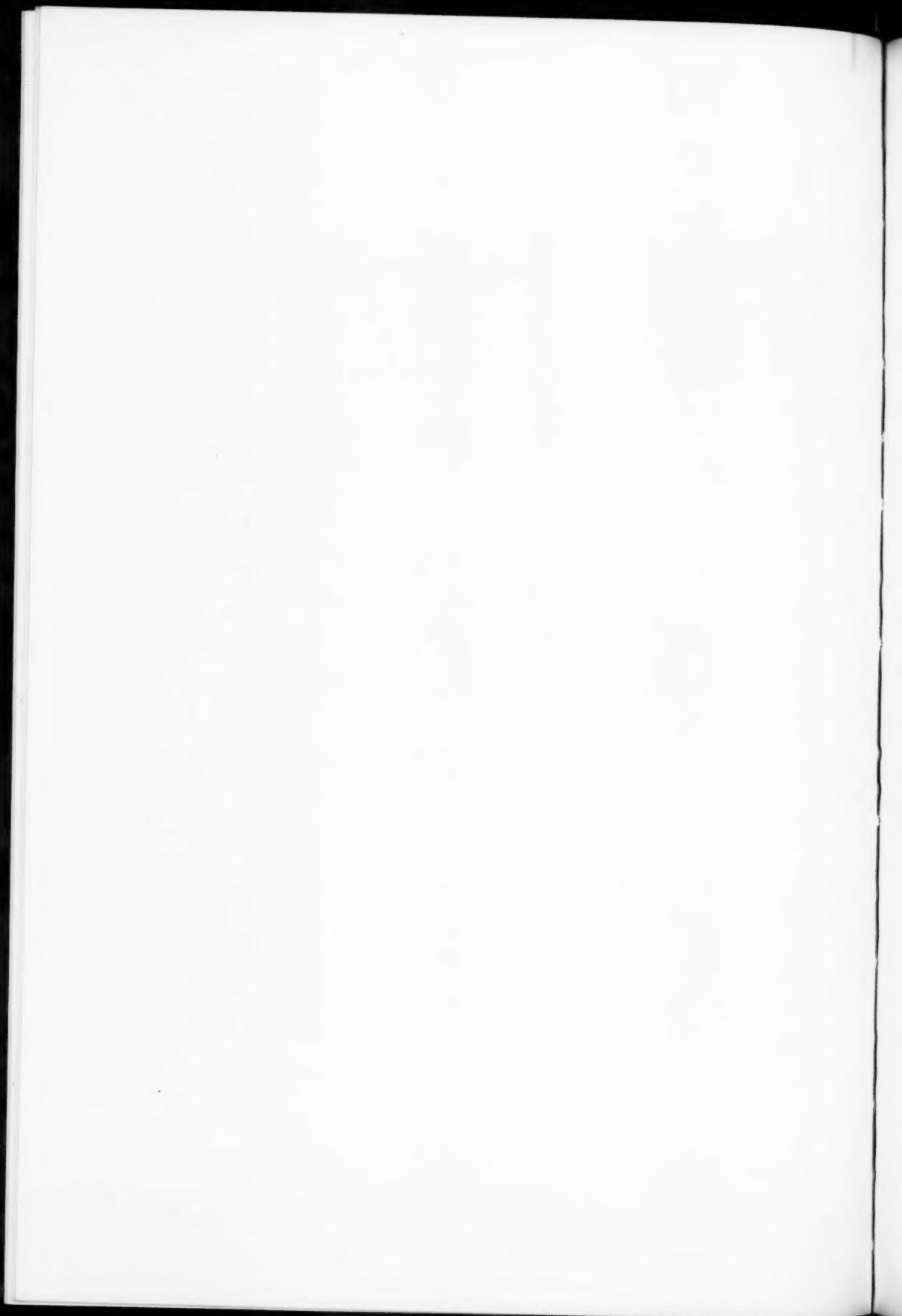
As a part of the child guidance work a special habit-training clinic for problem cases will be conducted, including a clinic for the examination and instruction of parents of these children, it now being well known that psychiatric treatment of the parents of



THE NEW YORK STATE PSYCHIATRIC INSTITUTE AND HOSPITAL, SHOWING THE MAIN ENTRANCE AT THE 168TH STREET LEVEL, WITH THE NEUROLOGICAL INSTITUTE ON THE RIGHT, AND THE NURSES' HOME OF THE PRESBYTERIAN HOSPITAL ON THE LEFT







a difficult child is of equal or even of more importance than the direct treatment of the child itself. Our facilities will permit us to take into the hospital for observation and study not only the problem child but also its mother or other member of the family if it seems advisable to do so.

*Admission of Patients:* Cases, either children or adults, may be admitted to the hospital department from any section of the State. Preference will be given to voluntary patients and to incipient and acute cases and other types offering prospects of betterment under special treatment. Transfer of patients from other State institutions may be effected when they offer an unusual problem in diagnosis or treatment, or can be used in research work, or for teaching purposes.

*Out-Patient Department:* The out-patient department of the Institute will occupy a large part of two floors—the tenth and the eleventh. Liberal provisions have been made for waiting rooms, offices and examining rooms. The main diagnostic and treatment facilities of the institution have been so located that they will be readily accessible for the out-patients as well as for the patients in the hospital wards. The children's clinic hours will be arranged so as not to conflict with those of the adult clinics.

Since the Medical Center began to function, the Medical College and the Presbyterian Hospital have conducted an active out-patient psychiatric clinic for teaching and treatment in the Vanderbilt Clinic where all of the various out-patient departments of the entire Medical Center are concentrated. The out-patient psychiatric service in the Vanderbilt Clinic is under the general supervision of the director of the Institute as head of the Department of Psychiatry in the Medical School. This service will be continued and coordinated with the out-patient clinic of the Institute. The Vanderbilt Clinic will be operated in the forenoons while the Institute clinic will operate in the afternoons, affording a continuous out-patient psychiatric service for the Medical Center. The personnel of the two clinics, including physicians, social service workers and psychologists, will be practically identical.

The Vanderbilt psychiatric service will be devoted mainly to cases referred for examination and treatment from other out-patient departments in the Vanderbilt Clinic while the Institute

clinic will receive mostly cases coming direct from the community or referred by various outside social and welfare agencies.

It is expected, of course, that most of the out-patients will come from the Metropolitan District. The work of the Institute will in no way conflict with the observation and committing functions of Bellevue Hospital.

*Medical Staff:* The nucleus of the medical staff of the hospital and out-patient department consists of the director and assistant director, a research associate in psychiatry, five full-time psychiatrists and five internes; in addition there will be consulting specialists and physicians from the State institutions taking post-graduate work and an undetermined number of volunteer workers in both the hospital and out-patient departments.

*Social Service:* The social service department, consisting of a chief social service worker and three assistants, will render intensive psychiatric social study of patients in the hospital as well as those who are being treated in the out-patient department and will carry on that part of the treatment which is particularly related to the physical and personal environment, occupation, and diversional requirements. It is expected that this department will eventually make certain scientific contributions as to the exact relation and value of psychiatric social service in the general field of psychiatry. This department will offer advanced instruction to graduates of recognized schools of social service and will give courses for practical instruction to selected students who have taken theoretical work in other schools, and will also arrange for conferences and special courses for social service workers in the various State hospitals and welfare institutions. The chief social service worker of the Institute will also direct the social service work in Vanderbilt Clinic and assist in presenting the subject of social service to medical students.

*Occupational Therapy:* The department of occupational therapy will take a very active part in this most important aspect of psychiatric treatment. The personnel, consisting of a chief occupational therapist, five assistants and an instructor in physical training, will concentrate their activities in the occupational therapy center to which patients from the hospital and the out-patient department will be referred by the psychiatrist. It is to be noted that

the occupational therapy center is essentially a point of concentration and that from this center, infiltrating all the wards, occupational therapy will be brought to those patients who for one or another reason are unable to go themselves to a central point for this particular form of therapy. We hope that the occupational therapy department will eventually be able to make certain scientific contributions to the whole problem of psychiatric treatment and develop new technics which are especially applicable to certain clinical conditions.

*Nursing Services:* The department of nursing, headed by a superintendent of nurses, will have the full responsibility for the nursing and general care of all patients in the hospital and in the out-patient department. It is fortunate indeed that the Institute, by its location, is so closely identified with the various other departments of a large Medical Center. It will thus attract nurses of proper calibre and hence tend to insure a certain stability in the organization and secure the kind of nursing attention that is so essential for the study and treatment of psychiatric patients.

*Dental Service:* The department of dentistry has been provided with all the most modern equipment. Not only will the usual and ordinary dental care be given to the immediate needs of the patients on the wards and in the out-patient clinic, but, headed by a dentist with research interests, it will work in close cooperation with the research departments of internal medicine, biological chemistry, bacteriology and psychiatry.

In addition there are certain other important departments in the hospital and in the out-patient department which, for lack of space, can only be indicated in the present communication, as, for instance, the department of physiotherapy which affords various types of hydrotherapy, electrotherapy and heliotherapy.

## PSYCHIATRIC INSTITUTE AND HOSPITAL

## PERSONNEL, CLINICAL AND RESEARCH DEPARTMENTS

Director .....	1
Assistant director (chief executive officer) .....	1

## HOSPITAL DIVISION

Senior psychiatrists .....	2
Junior psychiatrists .....	2
Internes .....	5
Superintendent of nurses .....	1
Supervisors, nurses and attendants .....	78

## OUT-PATIENT CLINIC

Senior psychiatrist (chief of clinic) .....	1
Attending psychiatrists (part time) .....	6
Assistant psychiatrists (voluntary) .....	10
Psychologists, social service and occupational therapy workers .....	11*
Nurses and attendants .....	5

## SPECIAL THERAPEUTIC DEPARTMENTS

Dentistry (dentist and dental interne) .....	2
Occupational therapy .....	6
Social adjustment .....	4
Physiotherapy (instructors, nurses and attendants) .....	8
Dietetics .....	1

## CLINICAL PATHOLOGY AND DIAGNOSTIC LABORATORIES

(Personnel supplied by Neurological Institute)

Clinical pathologist .....	1
Technicians and laboratory helpers .....	5

## RESEARCH DIVISION

Research associates (neuropathology, chemistry, bacteriology, internal medicine, psychiatry, psychology) .....	6
Research assistants .....	3
Technicians and laboratory helpers .....	13
Photographer, X-ray technician, curator museum .....	3

## VISITING AND CONSULTING SPECIALISTS

Internal medicine, neurology, pediatrics, general surgery, neuro-surgery, gynecology, ophthalmology, oto-laryngology, gastro-enterology, urology, roentgenology, pathology .....	12
Stenographers and clerical assistants .....	12
Librarian .....	1
Other officers and employees .....	56
Total personnel .....	257
Compensated .....	206
Uncompensated .....	51

\*Counted also in special department below.



*Research Activities:* With the hospital and out-patient division supplying the problems for psychiatric research, the clinical research division and the laboratory research division will be furnished with a constant supply of material. With the increased facilities provided at the new Institute, there will be an opportunity to take up in a more systematic and comprehensive way than ever before many promising lines of both clinical and laboratory research. The latitude which has been given the director in the selection of clinical cases makes it possible to concentrate at any one time all of our resources on the investigation of some major research problem.

The clinical research division consists of a department of clinical psychiatry headed by a research associate in psychiatry, a department of clinical medicine headed by a research associate in internal medicine, and a department of clinical and laboratory psychology, headed by a research associate in psychology.

The laboratory research division consists of three departments, viz: Neuro-anatomy and neuropathology, chemistry, and bacteriology, each directed by a research associate.

It should be emphasized that none of these research laboratory departments is to be handicapped by routine laboratory demands of the hospital or out-patient division. Such routine laboratory examinations will be performed in the clinical laboratory department which will also take care of similar routine needs of the Neurological Institute of New York, located next door to the Psychiatric Institute. This cooperative arrangement provides that the personnel for the clinical laboratory department be supplied by the Neurological Institute.

*Educational Work of the Institute:* Foremost among the teaching activities of the Institute will be those connected with the State hospitals and the State schools. The plan of giving special courses of instruction for physicians will be continued and further elaborated. Enlarged facilities and augmented staff will enable us to give more frequent courses and, we hope, better organized and more comprehensive courses in both the clinical and laboratory departments.

We are particularly anxious to organize, with the cooperation of the divisions of mental defect and prevention of the State Depart-

ment of Mental Hygiene, special courses for physicians working in the child guidance and adult out-patient clinics organized under the Department of Mental Hygiene. We will also be prepared to give special training to social service workers who are attached to these clinics.

In addition to the regular clinical and laboratory courses of two or three months' duration, we expect that there will be a steady stream of physicians coming from the various State institutions for work and study at the Institute for varying periods, depending on individual needs. We anticipate that the quarters set aside for State physicians will be continuously occupied. Physicians taking courses at the Institute will be admitted to clinics, ward rounds, lectures and demonstrations given in the various other units of the Medical Center.

A second important teaching activity of the Institute will be the instruction of medical students. Psychiatry now occupies a prominent place in the curriculum of the College of Physicians and Surgeons of Columbia University. Last year the number of hours allotted to the subject was increased over one hundred per cent. As a result the number of hours of required work in psychiatry for each student now totals one hundred and twenty-five, distributed over the second, third and fourth years.

The student-teaching in psychiatry is conducted chiefly by the staff of the Institute, assisted by a number of other physicians, many of whom are in the State hospital service or were previously connected with it. Practically all of the physicians on the hospital and out-patient departments of the Institute staff have received appointments in the Medical College. The director of the Institute is the head of the department of psychiatry in the Medical College. The teaching staff in psychiatry now comprises: one professor, four clinical professors, one assistant professor and eighteen associates and instructors, making a total of twenty-four. This relatively large teaching staff is significant of the importance now attached by the medical school to the instruction of students in the principles of psychiatry.

It is not our plan to conduct a regular training school for nurses, but we will offer systematic instruction for affiliate pupil nurses from the general hospital units of the Medical Center; we will also

provide courses for graduate nurses who wish to gain some experience in psychiatric nursing. A similar plan will be followed in giving advanced work to occupational therapists and psychiatric social service workers. Opportunities for instruction and clinic practice will also be afforded graduate students in psychology who are working for a university degree.

It is believed that the inauguration of the new Psychiatric Institute and Hospital marks a milestone in the progress of American psychiatry. From the standpoints of housing, physical facilities, scientific equipment and personnel for research work, no other development in this country approaches that which has now been provided on such a liberal scale by the State of New York. If in addition we think of the possibilities which the new Institute has through its location in a university medical center, for teaching psychiatry and influencing medical thought and practice, we may well consider the development as an ideal one. These splendid opportunities bring many new responsibilities. In attempting to meet these we are assured of the fullest cooperation from the various units of the Medical Center and we will, I am sure, receive in the future, as in the past, the hearty and helpful assistance of the Commissioner, superintendents, and the physicians generally throughout the State Department of Mental Hygiene.

## DOCTOR HAVILAND DIES IN EGYPT

Dr. C. Floyd Haviland, superintendent of Manhattan State Hospital and former State Hospital Commissioner, died Wednesday, January 1, 1930, in the Anglo-American Hospital at Cairo, Egypt, in his 55th year. He was taken ill on arriving with Mrs. Haviland at Shepherd's in Cairo from Jerusalem. The Reverend Doctor Ralph Watson, President of the American University at Cairo, having been informed by Mrs. Haviland of her husband's condition, assisted in his being taken to the hospital. Pneumonia and influenza developed steadily in spite of the best efforts of the physicians.

Dr. Haviland had won great distinction as a psychiatrist and hospital administrator. His professional attainments were high. His influence was wide. His contributions to the public service, while occupying official positions, were many and varied. His genial nature and his deep interest in the welfare of others gained for him a host of warm personal friends. Through his death the State of New York has lost one of its most valuable citizens, and the hospital service of the State, a beloved leader and friend.

The Quarterly Conference at its next meeting will hold a memorial service in his honor. At that time, fitting tribute will be paid to the worth of his character and the fruits of his labors.

Dr. Haviland was born on August 15, 1875, at Spencertown, N. Y. A few months later, his parents moved to Fulton, N. Y. He was graduated from the Fulton High School in 1893, and the same year, entered the Medical School of Syracuse University. He obtained his medical degree from that institution in 1896. He was appointed medical interne in Manhattan State Hospital on January 1, 1897. He was advanced through each of the lower grades of the medical service and in 1910, was appointed first assistant physician in Kings Park State Hospital.

In 1914 Dr. Haviland made a noteworthy survey of the care of the insane in the state of Pennsylvania for the National Committee for Mental Hygiene. It was the first state-wide survey of the insane ever made. The report of his findings, published by the Public Charities Association of Pennsylvania, was widely read and exerted great influence in improving the care of the insane in Pennsylvania.



C. FLOYD HAVILAND, M. D.







In 1915 Dr. Haviland was appointed superintendent of the State Hospital at Middletown, Conn. During the period of his progressive administration of that institution, he wrote many articles and delivered many addresses on occupational therapy, mental hygiene and allied subjects.

He was chairman of the Executive Committee of the Connecticut Society for Mental Hygiene from 1916 to 1921 and served as a member of the Connecticut State Commission on Psychopathic Hospital and as president of the Connecticut Conference of Social Work in 1921. In 1920 he was elected vice-president of the National Society for the Promotion of Occupational Therapy, and in 1921 was elected secretary-treasurer of the American Psychiatric Association.

On December 19, 1921, Dr. Haviland was appointed by Governor Nathan L. Miller of New York as medical member of the State Hospital Commission. He was subsequently elected chairman of the Commission. He served in that capacity until July 1, 1926, when he resigned and was appointed superintendent of the Manhattan State Hospital.

During the four and one-half years of Dr. Haviland's service as head of the State Hospital Commission, great advance was made in the development of the State system for the care and treatment of persons suffering from mental disease. In no similar period of time since the passage of the State Care Act in 1890, had so many progressive measures been instituted by the Commission. Throughout this period, the Commission enjoyed the hearty support of the Governor, the Legislature and the people of the State.

In his work as chairman of the Hospital Commission, Dr. Haviland was actuated by two principal motives; namely, the improvement of the hospitals so that a larger percentage of patients might recover or improve and, secondly, the prevention of mental disease so that fewer patients would need hospital treatment. Under his direction, a state-wide occupational therapy system was organized and has since been extensively developed in all of the State hospitals. The medical services of institutions were made more uniform and more efficient. A further gain in medical work was made by the establishment of diagnostic clinics.

It was during Dr. Haviland's term as Hospital Commissioner, that the bond issue of fifty million dollars for State institutions

was advocated and was approved by the people. Dr. Haviland exerted marked influence in this campaign.

In carrying out Dr. Haviland's ideas for prevention, the mental clinics conducted by the State hospitals were increased in number and strengthened. Efforts were made to extend the activities of the clinics to include problem children.

The crowning achievement of Dr. Haviland's work on the Hospital Commission was the adoption by the State of a policy of establishing research and preventive agencies in connection with educational institutions. In keeping with this policy, provision was made for the erection in New York City as a part of the new Medical Center of the Psychiatric Institute and Hospital which was opened in December, 1929, and for the Psychiatric Hospital now under construction to form part of the medical center of Syracuse University.

Dr. Haviland was a member of many professional organizations and societies. After serving several years as secretary-treasurer of the American Psychiatric Association to which he was elected in 1921, Dr. Haviland had the distinction conferred upon him in 1925 of election to the presidency of that organization. He was president of the American Occupational Therapy Association at the time of his death. He was a member of the American Medical Association, the Medical Society of the State of New York, the American Association for the Advancement of Science, the American Genetic Association, the Eugenics Research Association, the Association for Research in Nervous and Mental Diseases, the American Psycho-Pathological Association, the American Social Hygiene Association, the New England Society of Psychiatrists, the New York Society of Clinical Psychiatry, the New York Neurological Society, the New York Society of Medical Jurisprudence and the New York Psychiatric Society.

Dr. Haviland was a member of Phi Kappa Psi, the medical fraternity of Nu Sigma Nu, the honorary fraternity of Phi Kappa Phi, as well as the Lotus Club, the International Medical Club, and The Rotary Club of New York.

Besides Mrs. Haviland, who was formerly Amy Amelia Miller of New York, Dr. Haviland is survived by his father, Dr. Norman H. Haviland, who is still engaged in medical practice at Fulton, N. Y., at the age of 86, and his brother, Dr. F. Ross Haviland, first assistant physician at the Brooklyn State Hospital.

The following is an abstract of the resolutions on Dr. Haviland's death adopted by the Board of Visitors of the Manhattan State Hospital at a special meeting held on January 2, 1930:

#### RESOLUTIONS

The Board of Visitors of the Manhattan State Hospital, at a special meeting held January 2, 1930, resolved to register its profound grief and sorrow at the unexpected and untimely death of Dr. C. Floyd Haviland, superintendent and medical director of the hospital. Dr. Haviland prior to and especially through the period of his chairmanship of the State Hospital Commission, which covered an active period of six years, acquired an intimate knowledge of the needs of the State hospitals and of their thousands of mentally afflicted patients, and he became a master director and a wise consultant on matters institutional. The personal loss to the Board is incalculable, as Dr. Haviland was a delightful friend, a cheerful comrade and an energetic co-worker, who radiated optimism and inspiration.

The patients will deeply feel his absence, for in his visits to the wards he distributed cheer, smiles and words of encouragement.

Nature had so beautifully blended in Dr. Haviland the elements of the good doctor and the good man that all who knew him loved him.

The life of the noble man, whose loss the Board is mourning, was rich in accomplishments, which will live after him, and remain as a light to guide those who follow in his footprints. This is Dr. Haviland's earthly title to true immortality.

The Board of Visitors offers heartfelt sympathy to the devoted wife and dear family, knowing well, however, that words of condolence, no matter how sincere in the presence of the tragedy of bereavement, are but empty sounds.

The Board further resolved that these resolutions be spread on its books, published in the daily press, and a copy thereof be forwarded to the bereaved wife.

ROBERT ABRAHAMS, M. D.,  
*President.*

JULIA KEMP WEST,  
*Secretary.*

## NOTES

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Dr. B. W. Carr, chief of physiotherapy and occupational therapy of the United States Veterans' Bureau, and vice president of the American Occupational Therapy Association, died in Washington, D. C., January 14, 1930, from cerebral hemorrhage. He had made a brilliant record in the Veterans' Bureau and was held in the highest esteem by his associates, and by the members of the American Occupational Therapy Association.

—The National Probation Association has received a grant of \$33,000 from the Bureau of Social Hygiene of the Rockefeller Foundation for a two-year study of juvenile detention homes throughout the United States. The purpose of the study is to learn what method of care is suited to the individual child and best meets his needs. It is thus hoped to prevent the misuse of such homes for correctional purposes or for the care of children who should be at home.

—Former President Calvin Collidge, former Governor Alfred E. Smith and Mr. Julius Rosenwald, acting as a committee of three to select the beneficiaries of the residuary estate of Conrad Hubert, manufacturer of electric flashlights, selected thirty-four institutions which in their opinion are the most worthy of aid in the country. Among these were the National Committee for Mental Hygiene, and the Jewish Mental Health Society. Each was awarded \$250,000. In the case of the latter society the award is to be used toward building a new hospital.

—The National Committee for Mental Hygiene recently conducted a survey of facilities for mental hygiene in New York City at the request of the New York City Committee for Mental Hygiene. The report of the survey indicates that there are 67 mental clinics in operation with an aggregate attendance of 50,000 people a year. The survey stresses the need of an increase in the facilities for mental hygiene and the need of raising standards of examination service, personnel records and equipment. It is felt that the extension and improvement of these clinics would decrease the demand for accommodation in the State hospitals where overcrowding is a serious problem.

—Mr. John R. Shillady, administrative secretary of the First International Congress on Mental Hygiene, has issued a preliminary statement of the program to be offered in Washington, D. C., May 5-10, 1930. The members of the Program Committee include Dr. Frankwood E. Williams,



chairman, Dr. C. Macfie Campbell, Dr. William Healy, Dr. Lawson G. Lowrey, Dr. Howard W. Potter and Dr. Arthur H. Ruggles. All papers will be limited to ten minutes' duration in order to facilitate general discussion.

—Nearly 700 psychiatrists, psychologists, educators, social workers and prominent laymen attended a dinner in celebration of the twentieth anniversary of the National Committee for Mental Hygiene. Dr. William H. Welch of John Hopkins University presided. Among the speakers were President James R. Angell of Yale, Dr. William A. White, superintendent of St. Elizabeths Hospital, Dr. Frankwood E. Williams, medical director of the National Committee for Mental Hygiene, and Mr. Clifford W. Beers, whose autobiographical "A Mind That Found Itself" inaugurated the mental hygiene movement.

—The following were re-elected officers of the National Committee for Mental Hygiene: President, Dr. Chas. P. Emerson; vice presidents, James R. Angell, Rt. Rev. William Lawrence, Dr. William L. Russell, and Dr. Bernard Sachs; treasurer, Frederic W. Allen; secretary, Clifford W. Beers.

—Dr. Albert Vander Veer of Albany, N. Y., died on December 19, 1929, at the age of 88, closing a distinguished career in medicine and public service. After graduating from George Washington University in 1863, he served with distinction as a surgeon in the Army of the Potomac during the Civil War. He later became a guiding figure in the Albany Medical College, and served as president of the Medical Society of the State of New York, and as president of the American Medical Association. He was a regent of the University of the State of New York from 1895 to 1921 and was Chancellor of the Board at the time of his retirement.

—The Department of Institutions and Agencies of the State of New Jersey has offered a valuable contribution to the problems of early diagnosis and treatment of mental disease, and to the relief of State hospitals from overcrowding. It has issued a bulletin by Dr. Emil Frankel, director of research, and Thomas B. Kidner, hospital consultant, which develops a plan for the care and treatment of nervous and mental patients in general hospitals. The bulletin stresses the reciprocal advantages of such a plan to the patient and to the hospital. Detailed plans are discussed for the conversion of sections or wings of general hospitals into psychiatric divisions.